

# INITIAL STUDY/ DRAFT MITIGATED NEGATIVE DECLARATION/ ENVIRONMENTAL ASSESSMENT:

Mission Creek South Coast Conduit Crossing  
and Fish Passage Improvement Project



U.S. Department of the Interior  
Bureau of Reclamation



Cachuma Operation and  
Maintenance Board

April 2009

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## Mission Creek South Coast Conduit Crossing and Fish Passage Improvement Project

Prepared for:



U.S. Department of the Interior  
Bureau of Reclamation



Cachuma Operation and  
Maintenance Board

Prepared by:



Science Applications International Corporation

April 2009

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- A Figures and Plans
- B Intersection Level of Service Criteria
- C Cumulative Projects
- D Biological Resources Survey Report
- E Mitigation, Monitoring, and Reporting Plan

## 1.0 Introduction

This Initial Study/Draft Mitigated Negative Declaration/Environmental Assessment (IS/MND/EA) has been completed for the project described below and is intended to fulfill the requirements of the California Environmental Quality Act (CEQA) (PRC 21000 et seq.) and the National Environmental Policy Act (NEPA) (42 U.S.C. §§4321-4370d).

### 1.1 Lead Agencies

**CEQA Lead:** Cachuma Operation and Maintenance Board (COMB), 3301 Laurel Canyon Road, Santa Barbara, CA 93105-2017

**NEPA Lead:** U.S. Bureau of Reclamation (Reclamation), 1243 N Street, Fresno, CA 93712

### 1.2 Applicant

COMB, 3301 Laurel Canyon Road, Santa Barbara, CA 93105-2017

**Contact Person:** Brett Gray, Operations Supervisor; 805-687-4011, bgray@cachuma-board.org

**Agent:** This document was written on behalf of COMB by Science Applications International Corporation (SAIC), 5464 Carpinteria Avenue, Suite K, Carpinteria, CA 93013. Project Manager: Rosie Thompson 805-566-6430

### 1.3 Project Address/Location

The project site (Attachment A, Figure A-1) is located in southern Santa Barbara County, CA, on the south-facing slopes of the Santa Ynez Mountains. The project site is at the Highway (State Route) 192 (=Foothill Boulevard) crossing of Mission Creek, which flows about 8 miles (13 km) out of the Santa Ynez Mountains, through the City of Santa Barbara, to the Pacific Ocean. Mission Creek is located in the Santa Barbara U.S.G.S. 7 ½ minute quadrangle, and the project site is in T4N, R27W about 4.4 miles (7 km) upstream from the ocean at 34.44685° N, 119.708694° W.

The fish passage portion of the proposed project is a 125-foot (38.1-meter) long reach of Mission Creek on the south side of the Highway 192 Bridge, located in a residential area. The pipeline replacement portion of the project is a corridor that crosses the creek on the south side of the bridge and extends a short distance to the east and west of the creek. Project construction activities on the downstream side of the bridge would occur in Assessor's Parcel Numbers (APN) 023-240-09, -10, and -11. These parcels are 1.06 acres (0.43 hectare), 5.46 acres (2.21 hectares), and 11.60 acres (4.70 hectares), respectively. Stream diversion during construction and site restoration would affect parcels 023-180-52 and 023-200-31. These parcels are 0.36 acre (0.15 hectare) and 8.00 acres (3.24 hectares), respectively. Parcels 023-240-09, 023-180-52, and 023-200-31 are within the County of Santa Barbara, while the other two parcels are in the City of Santa Barbara. Zoning is park and recreation (PR) for 023-240-10 and single family residential/estate (R-1/E-1/A-1) for the other parcels.

Access to the project site is via Highway 192. Equipment would access the creek from the east bank on the south side of the bridge.

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## 2.0 Project Description

### 2.1 Project Background

The South Coast Conduit (SCC) was constructed by the U.S. Bureau of Reclamation (Reclamation) in 1954, and the Cachuma Operation and Maintenance Board (COMB) operates the SCC from the north portal at Lake Cachuma to Carpinteria Reservoir. The pipeline supplies approximately 80 percent of the South Coast's water supply. As part of the Phase 2 Reliability Study for the SCC conducted in 2006, seven creek crossings, identified as areas of concern in the 2005 Reliability and Alternatives Study (Boyle Engineering 2005), were evaluated. The Mission Creek crossing, located at approximately pipeline Station 74+00, is about 25 feet (7.6 m) downstream of the Highway 192 Bridge, and an emergency (retrofitted) concrete cap to prevent channel bed scour beneath the bridge footings was placed over the pipeline at the then current flow line. The concrete cap is now undermined on the downstream side, and the concrete acts as a grade control structure. The Mission Creek crossing was identified as having continued exposure to undermining that could expose the pipeline. The recommended approach was to replace the crossing (along with others) with new pipe encased in structural concrete at a greater depth (Boyle Engineering 2005 and 2008).

In June 2007, a report prepared for the Santa Barbara County Public Works Department addressed Mission Creek at Highway 192 (Questa Engineering 2007). That report concluded that the existing concrete apron is a barrier to migrating salmonids, and should be removed and replaced with a riffle-pool stream bed (Questa Engineering 2007). The proposed stream improvement for fish passage cannot practically be constructed without relocation of the SCC to a greater depth across Mission Creek. COMB will replace the SCC at Mission Creek and implement the proposed stream channel improvements in one project.

### 2.2 Purpose and Need

The purpose of this project is to replace a section of the SCC to protect it from damage by scour; remove an existing fish passage barrier; and improve the stream channel to reduce lateral scour of the banks. Mission Creek and its watershed contain a viable population of southern steelhead (*Oncorhynchus mykiss irideus*), which is a federally-listed endangered species, and enhancement of this population is a high priority. Immediately downstream of the Highway 192 Bridge a perched concrete apron acts as a jump and depth barrier to all life stages of southern steelhead. The concrete apron extends roughly 40 feet (12 meters) downstream with an 11 percent slope and spans the entire width of the channel. The apron is now perched due to downstream bed adjustments, and the condition of the apron is poor, being cracked in several areas and exhibiting lateral undercutting along the bank edges. The relatively flat nature of the apron also causes flow to be directed to the banks causing bank erosion. The SCC is threatened due to natural scour of the creek, and the fish passage improvements would have added an additional threat.

The SCC would be buried deeper to avoid future damage by scour. Reconstruction of the channel downstream would increase the geomorphic and hydraulic diversity by using a natural gradation of cobbles, gravels, and boulders, and the existing pool would also be maintained, as it is a valuable resting area for fish. The beneficial effect of these improvements will be the elimination of the

existing jump barrier, the creation of a channel that is passable to fish over a greater range of flows, and protection of the SCC.

## **2.3 Proposed Project/Proposed Action**

The proposed work is composed of two parts. The first part is to repair and secure the SCC. The second part of the project is reconstruction of the channel bed so that fish may migrate upstream and downstream of the bridge structure (see plans in Attachment A, Figures A-2 and A-3).

No redundant water supply or pipeline exists to convey Cachuma Project water or State Water Project water to Summerland and Carpinteria if the SCC is out of service due to unexpected repairs at the Mission Creek crossing. The storage capacity of the reservoirs downstream of the site limits the maximum pipeline shutdown to one week. Thus, a bypass pipeline (Attachment A, Figure A-4) would be required during project construction and would extend from near the eastern edge of an existing private driveway at 2409 Foothill (SCC Station 72+34.83) to the Sheffield control station, a distance of about 1,030 feet (314 m). This 24-inch temporary bypass pipeline would include a temporary pipe crossing over Mission Creek on temporary anchored pipe supports that parallels the existing bridge with a minimum 2-foot (0.6-m) separation from the bridge. A short segment of the bypass pipe of approximately 30 feet (9 m) would be buried under the access road to the Tennis Club. The pavement would be saw cut during the day followed by excavation of a trench for the pipeline, placement of the pipe, and covering the pipe. Burial of the pipeline would require a brief (less than one day) closure of that access road. Thrust collars would be constructed around the existing pipeline near the location of the pipeline line valve. The line valve would be installed on the SCC to direct flow into the temporary bypass pipeline. A shutdown of the SCC for up to approximately one week would be required for installation of the line valve and connection of the bypass line. To minimize the shutdown period, particularly under unanticipated circumstances, work hours could be extended up to 24 hours/day. To avoid service interruption to the Tennis Club, burial of the bypass pipeline under their driveway would occur outside of business hours for the Tennis Club.

Flow in Mission Creek would be diverted into a bypass culvert around the work area (Attachment A, Figure A-2). A fish screen would be placed across the channel just upstream of the diversion location to prevent fish from entering the work area while the diversion is installed. The diversion would consist of a sandbag and plastic temporary dam with a sump on the upstream side. Water would be pumped out of the sump into the diversion culvert, and energy dissipation would be provided at the downstream release point. Fish resident in the work area to be dewatered, including the pool below the concrete apron, would be captured and transported to suitable habitat upstream of the site as the work area is dewatered. Silt fence would be installed just downstream of the diversion dam and at the lower end of the work area as flow is reduced. A debris fence would be installed on the upstream side of the fish screen to capture leaves and other floating debris that could interfere with operation of the dewatering pump.

Approximately 70 feet (21 m) of the existing pipeline would be removed and replaced at a greater depth (see Attachment A, Figure A-5). This would require excavation of a trench from top of bank to top of bank. The entire concrete apron would be broken up and removed during this excavation. Due to the unconsolidated material in the creek bed and subsurface water, shoring would be used to



maintain an open trench for the work. Water would be pumped from the trench and filtered and/or settled using a Baker tank or other similar means prior to release to the creek. The existing blowoff manhole on the east bank of the creek would be rehabilitated in place and a 6-inch (15-cm) blowoff drain pipeline would be constructed from the blowoff to the creek once the new pipeline is installed. After the existing pipe is removed, the trench would be excavated deeper for the new pipeline segment. Pea gravel bedding would be placed in the bottom of the trench prior to laying the pipe and backfilling the trench. The pipe would be encased in concrete to prevent further damage during floods. Once the new pipe segment is connected to the existing pipe, the temporary bypass would be removed so water can flow in the SCC across Mission Creek again.

Once the temporary bypass pipeline is installed and operational, the bypassed section of pipeline would be drained at the Sheffield control station. The small amount of water remaining in the pipe at the creek crossing (low point of the pipeline) may be drained via the existing blowoff drain pipeline. The new pipeline segment would be filled with water for hydrostatic testing, and chlorine would be added for disinfection. All water used for cleaning and disinfecting the new pipeline segment would flow east in the SCC to be discharged at the Sheffield control station such that none enters Mission Creek. Once the project is completed, the blowoff and new drain line would be used during emergencies and planned maintenance of the SCC to drain small quantities of water from the pipeline. The latter is anticipated to occur up to twice a year. Disinfectants would be removed prior to discharge to the creek, and the discharge rate would be low so that no scour would occur at the discharge point. Operation of the SCC once the project is complete would involve no other disturbances to the creek.

The second part of the project entails rehabilitation of the creek bed. The grade would be controlled by constructing two rock riffles with 2-ton angular boulder weirs at their downstream ends (Attachment A, Figure A-3). Beginning at the base of the bridge at station 220, elevation 435 (low flow), the first riffle would slope at 5 percent for 50 feet (15 m), where it would meet the existing pool. Changes in channel width (i.e., creating a local constriction) and the ramping effect of the riffle would maintain the existing pool. The second riffle would begin at the tail of the upstream pool and extend at 5 percent for 20 feet (6 m) until meeting the existing grade. The overall average grade through the project reach would be 3 percent, much lower than the existing apron.

Riffle construction would consist of keystone trenches at the beginning and end of each riffle. These keystone trenches would be filled with large 2-ton boulders and packed with a matrix of angular 3- to 8-inch (7.6- to 20-cm) stone, gravel, and sand. A surface layer of large and small boulders, both angular and rounded rock, would be placed in the riffles. This layer would be a minimum of two feet (0.6 m) deep and highly graded. The average size of the surface layer rock would be 12-inch (31 cm) cobbles, and a coarse gravel-sand matrix would be jetted into the top layer. The concept is to create an armor that is generally less mobile than the natural armor layer upstream and downstream of the project site. The angular rock is more difficult to mobilize and can lock tightly together to provide enhanced riffle stability. The channel would slope at 15 percent to the center line to concentrate lower flows to facilitate fish movement. To provide low-flow paths for summer flows and velocity refuge for higher flows, alternating boulder clusters would be installed as well. The boulder clusters would consist of three or more 1- to 2-ton boulders that would be embedded one half their diameters into the bed to create velocity eddies for fish resting.

Pool construction would utilize rock weirs in conjunction with constricting boulders to provide necessary hydraulic constrictions which aid in creating and maintaining pool depth. The rock weirs on the upstream end of the pools also provide grade control and scour protection for the bridge and pipeline.

Because the bridge sits on a spread footing on top of debris flow material, preventing scour in and around the bridge is critical. A separate flood control and scour analysis was completed for this project (Questa Engineering 2008). Because scour control is critical, grouted rock bank protection would be installed on the banks adjacent to the downstream side of the bridge (see plan drawings in Attachment A, Figures A-2 and A-3). A layer of 250-pound rock would be placed on the reconstructed slopes adjacent to the bridge, and concrete grout would be placed on top of the layer. The tops of some rocks would be left exposed to provide a rough surface texture. In addition, a grouted boulder cutoff wall would be installed under the bed across the channel adjacent to the bridge. This wall also would extend along the sides of the upper riffle in the new channel downstream to the first rock weir. The wall would be buried in the stream bed so that it does not protrude above the channel bottom. Lateral scour from the first weir to below the second weir would be controlled by the placement of a 1-ton rock toe along the reconstructed banks of the project. Above this rock toe, bio-technical bank stabilization measures would be used. These include willow pole plantings in the toe rock, high strength bio-degradable erosion control blankets, hydro-seeding, and tree and shrub planting.

Once the channel reconstruction is complete, the creek diversion would be dismantled to allow flow through the new channel.

## **2.4 Equipment and Materials**

Pipe bedding (2 trips), 36-inch pipe (1 or 2 trips), 24-inch bypass pipe (6 trips), and rock (3 trips) would be delivered to the site by truck. An estimated 15 cubic yards (cy) of pea gravel bedding material and 20 tons of rock would be required for the project. Equipment to be used during project construction includes a tracked excavator, loader, concrete trucks, pumps (for dewatering work area), plastic and sandbags for creek diversion, jack hammer, crane, welder's truck, other light trucks, and a backhoe.

## **2.5 Access and Staging**

Access to the site would be from Highway 192. An access ramp would be constructed down the east bank to the creek bed, and excavation would occur from the top of both banks. An open disturbed area at the south end of the Tennis Club driveway would be used for staging and storage of materials as well as worker parking.

## **2.6 Environmental Controls**

The following environmental controls are included for construction of the project.

## Fugitive Dust Control Measures

- a. **Minimize Disturbed Area/Speed.** Minimize amount of disturbed area and reduce on-site vehicle speeds to 15 miles per hour (mph) [24 kilometers (km)/hour] or less.
- b. **Watering.** During clearing, grading, earth moving, or excavation, sufficient quantities of water, through use of either water trucks or sprinkler systems, shall be applied to prevent dust from leaving the site. Each day, after construction activities cease, the entire area of disturbed soil shall be sufficiently moistened to create a crust. Throughout construction, water trucks or sprinkler systems shall also be used to keep all areas of vehicle movement damp enough to prevent dust raised from leaving the site. At a minimum, this will include wetting down such areas in the late morning and after work is completed for the day. Increased watering frequency will be required whenever the wind speed exceeds 15 mph (24 km/hour).
- c. **Tarping.** Trucks transporting fill material (soil) to and from the site shall be covered from the point of origin.
- d. **Gravel Pads.** Gravel pads shall be installed at all access points to prevent tracking of mud onto public roads.
- e. **Stockpiling.** If importation, exportation, and stockpiling of fill material are involved, soil stockpiled for more than two days shall be covered, kept moist, or treated with soil bindersto prevent dust generation.
- f. **Disturbed Area Treatment.** After clearing, grading, earth moving, or excavation is complete, the entire area of disturbed soil shall be treated to prevent wind pickup of soil. This may be accomplished by:
  - a. Revegetation;
  - b. Spreading soil binders;
  - c. Sufficiently wetting the area down to form a crust on the surface with repeated soakings as necessary to maintain the crust and prevent dust pickup by the wind;
  - g. The contractor or builder shall designate a person or persons to monitor the dust control program and to order increased watering, as necessary, to prevent transportof dust offsite. Their duties shall include holiday and weekend periods when construction work may not be in progress.

## 2.7 Construction Schedule

In-channel construction activities would be conducted during the fall low-precipitation, low-flow period to reduce the potential for impacts on aquatic species and water quality. Construction of the thrust collars and insertion of the line (isolation) valve is scheduled for the fall of 2009 to spring of 2010. This work would be outside the creek. Installation of the bypass pipeline and work in the creek bed (pipeline replacement and fish passage contouring) would be initiated in the fall of 2010 and completed by winter of 2010.

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## **3.0 Alternatives**

Three alternative designs for the fish passage portion of the project were evaluated (Questa Engineering 2007): step pools, riffle-pool, and roughened channel. Of these, the riffle-pool alternative was found to be the most viable alternative considering site constraints, public safety, geomorphic stability, and hydraulic performance. Therefore, the riffle-pool design is addressed in the impact analysis as the fish passage component of the proposed project. Installation of the fish passage portion of the project requires replacement of the SCC at a greater depth to protect it from scour damage. No alternatives to this pipeline replacement are feasible. In addition to the proposed project, a No Action Alternative is addressed in the impact analysis.

Under the No Action Alternative, the concrete apron would not be removed, the SCC would not be replaced at a lower depth, and no fish passage improvements would be made. Operation and maintenance of the SCC would continue as in the past. The concrete apron would continue to be a barrier to fish passage and to cause erosion and scour along the banks, which threatens the integrity of the SCC and the local water supply.

## **4.0 List of Cumulative Projects**

A list of projects used in the cumulative analysis is included as Attachment C and shown on Figure A-6. Resource-specific cumulative analysis is provided under each resource description.

## **5.0 Required Permits**

- U. S. Army Corps of Engineers (USACE) Section 404 Permit
- California Department of Fish and Game (CDFG) Streambed Alteration Agreement
- Regional Water Quality Control Board (RWQCB) Section 401 Certification
- Caltrans Encroachment Permit

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## **6.0 Environmental Setting**

### **6.1 Existing Site Characteristics**

The following is a brief summary of site characteristics described in greater detail in the resource sections of this document.

#### **Topography**

The site is located in the foothills of the Santa Ynez Mountains with an existing slope of 4.5 percent through the project site. Mission Creek has a deeply incised channel in this area.

#### **Seismic/Geologic Conditions**

Although the project is located in a seismically active region, no active faults that might be capable of surface rupture traverse the project site. The site is located on Holocene stream channel deposits, and the stream had a well-armored channel.

#### **Flooding/Fire Hazard**

The project is located primarily within Mission Creek and would, therefore, be susceptible to flooding. The project site is located in an area that is susceptible to forest fires, as evidenced by the recent Tea Fire in November 2008 that burned approximately 1,940 acres (786 hectares).

#### **Creeks/Drainage**

Mission Creek discharges into the Pacific Ocean.

#### **Biological Resources**

Mission Creek sustains a riparian corridor with a closed canopy of sycamores and willows with a scattered to thick understory. Mission Creek contains flowing water through the year with releases from Gibraltar Reservoir to maintain flow in the dry season. The substrate of the creek bed is composed of cobbles and gravel with scattered boulders. Federally-listed steelhead or rainbow trout (*Oncorhynchus mykiss*) are present in the creek.

#### **Archaeological Resources**

Archeological resources are known to be present in the project vicinity. One historic site is located within the immediate project area and one prehistoric site and burial area is located 410 feet (125 meters) northwest of the project location (Stone 2007).

#### **Noise**

Current noise in the project vicinity is associated with Highway 192 traffic and residences in the vicinity. The adjacent private tennis club also contributes to the ambient noise in the area.

## **Existing Land Use**

### ***Existing Facilities and Uses***

Residential development is present on the west side of Mission Creek in the project vicinity, both north and south of Highway 192. The parcel adjacent to the creek on the east side and north of Highway 192 is currently undeveloped. On the east side of the creek south of Highway 192, the parcel adjacent to the creek is open space zoned for park and recreation. A private tennis club is on the east side of that parcel.

### ***Access and Parking***

Access to the project site is via Highway 192. A staging area for equipment and material storage and worker parking will be located in an open, disturbed area at the south end of the Tennis Club driveway.

## **6.2 Property Characteristics**

Assessor's Parcel Number:	See above	General Plan Designation:	A-1 and PR
Zoning:	Residential/Park and Recreation	Parcel Size:	See above
Existing Land Use:	Open creek bed	Proposed Land Use:	Open creek bed
Slope:	4.5% in stream bed, banks are steeper		
Surrounding Land Uses			
North:	Open space on east and residential on west sides of creek		
South:	Open Space and Residential		
East:	Open Space and tennis club		
West:	Residential		



## 7.0 Plans And Policy Discussion

This joint IS/MND/EA is intended to fulfill the requirements of the California Environmental Quality Act (CEQA) (PRC 21000 et seq.) and the National Environmental Policy Act (NEPA) (42 U.S.C. §§ 4321-4370d). This IS/MND/EA has also been prepared to address requirements of the following statutes:

- National Historic Preservation Act (NHPA), 16 U.S.C. §§ 470-470x-6;
- Clean Water Act (CWA), 33 U.S.C. §§ 1251-1387;
- Clean Air Act (CAA), as amended, 42 U.S.C. §§ 7401-7671p, including 1993 General Conformity Rule;
- Executive Order (EO) 12898 – Federal Actions to Address Environmental Justice in Minority Populations and Low-income Populations, 11 February 1994;
- Endangered Species Act (ESA), 16 U.S.C. §§ 1531-1544;
- Migratory Bird Treaty Act (MBTA) (16 U.S.C. §§ 703 et seq.);
- EO 11988 – Floodplain Management;
- Resource Conservation and Recovery Act (RCRA), 42 U.S.C. § 6901 et. seq., as amended; and
- Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), 42 U.S.C. § 9601 et. seq., as amended.

COMB is the lead agency for CEQA compliance. This IS/MND/EA is being jointly prepared in accordance with NEPA because the SCC is owned by Reclamation, a federal agency. Reclamation is the lead agency for NEPA compliance.

While CEQA requires that a determination of significant impacts be stated in an IS/MND, NEPA does not require this for an EA. Under NEPA, significance is used to determine whether an environmental impact statement (EIS) or some other level of documentation is required. The EA is the basis for developing information on which to determine significance, such as the context of the intensity of the impacts, while a separate document, the Finding of No Significant Impact, documents when there is no significant impacts or an EIS is will be done. Once a decision to prepare an EIS is made, the magnitude of the impact is evaluated and no further judgment of significance is required.

This document follows the City of Santa Barbara Initial Study/Mitigated Negative Declaration checklist; however, some sections of the document have been modified to include standard components of NEPA documents.

**Land Use and Zoning Designations:** This site is an open creek bed that flows under Highway 192. Residences on large lots are present along the west side of the creek. Open space is on the east side of the creek. The zoning is residential to the north, west, and southwest with park and recreation to the east and southeast as described above under Project Location/Address.

**Mission Canyon Community Plan:** The proposed project is located on the southeast boundary of the Mission Canyon Community Plan (MCCP), see Attachment A, Figure A-7. The intent of the

MCCP is to articulate the community's expressed desire to preserve neighborhood character and charm and protect and enhance the quality of life enjoyed by residents and visitors (Santa Barbara County 2008a). The MCCP primarily addresses land use and development within the planning area. The portion of the project area that is within the County of Santa Barbara is within the MCCP area. However, the proposed project is a temporary disturbance and does not include any changes in land use or development.

#### **City of Santa Barbara General Plan Policies:**

**Conservation Element.** The Conservation Element of the General Plan contains goals and policies that maintain and enhance creek environments, protect scenic resources, oppose unnecessary tree removal, maintain air quality above applicable standards, protect and enhance ecological resources, and preserve historic resources. The proposed project would remove a portion of the existing concrete apron and stabilize an eroding creek channel and associated banks. Although the project would require removal of vegetation along the creek banks in the area to be excavated for the pipeline work, and this includes a few native trees that would be replaced, the proposed project would result in the overall enhancement of the Mission Creek environment and improve fish passage. No historic resources would be affected. Construction activities would have minor, temporary visual effects, but the restored creek would have improved scenic value. Air quality would be within applicable standards during construction and would not be affected once construction is complete. Therefore, the project would be consistent with the above goals. This element was adopted in August 1979 and last amended in July 1994.

**Parks and Recreation.** The Parks and Recreation Element states the high importance of Parks and Recreation in Santa Barbara's primarily residential community. The General Plan makes recommendations to increase acquisition of parks and recreation space and facilities for public use and welfare due to the prime importance of the element in the environment. The proposed project would result in temporary disturbances to a small, undeveloped portion of the parcel on the eastbank zoned as park and recreation. Upon completion of the project, the disturbed areas would be restored and revegetated with no effects on future use of the parcel. Therefore, the project would be consistent with the Parks and Recreation Element goals.

#### **Santa Barbara County Comprehensive Plan:**

**Conservation Element.** This element of the Santa Barbara County Comprehensive Plan provides for the protection of native oak trees in the inland rural areas of Santa Barbara County. The goal is for Santa Barbara County to promote the conservation and regeneration of oak woodlands in the County over the long term, and, where feasible, to increase the native oak population and extent of woodland acreage. The highest priority for conservation, protection, and regeneration shall be for valley oak trees, valley oak woodlands, and valley oak savanna. The proposed project would not remove any oak trees greater than 6 inches (15 cm) in diameter within the County and, thus would be consistent with the Conservation Element.

#### **Mitigation Monitoring and Reporting Plan (MMRP)**

A draft Mitigation Monitoring and Reporting Plan has been prepared for the project in compliance with Public Resources Code §21081.6 (see Attachment E).

## 8.0 Environmental Checklist

The following checklist contains questions concerning potential changes to the environment that may result if this project is implemented. If no impact would occur, **NO** should be checked. If the project might result in an impact, check **YES** indicating the potential level of impact as follows:

**Significant.** Known substantial environmental impacts. Further review needed to determine if there are feasible mitigation measures and/or alternatives to reduce the impact.

**Potential to be Significant.** Unknown, but potential for significant impacts that need further review to determine if significant and whether mitigable.

**Potential to be Significant but Mitigable.** Potential for significant impacts that can be avoided or reduced to less than significant levels with identified mitigation measures agreed-to by the applicant.

**Less than Significant.** Impacts that are not substantial or significant.

<b>8.1 Aesthetics</b> Could the project:	<b>NO</b>	<b>YES Level of Significance</b>
a) Affect a public scenic vista or designated scenic highway or highway/roadway eligible for designation as a scenic highway?		X - Less than significant
b) Have a demonstrable negative aesthetic effect in that it is inconsistent with Architectural Board of Review or Historic Landmarks Guidelines or guidelines/criteria adopted as part of the Local Coastal Program?		X - Less than significant
c) Create light or glare?		X - Less than significant

### Visual Aesthetics – Discussion

**Issues:** Issues associated with visual aesthetics include the potential blockage or degradation of important public scenic views, project compatibility with the surrounding area, and changes in exterior lighting.

### Visual Aesthetics – Existing Conditions and Project Impacts

#### **Existing Conditions/Affected Environment**

The foothills and sheer upper face of the Santa Ynez Mountains, the riparian corridors of Mission and Rattlesnake creeks, and the Pacific coastline provide vistas of great natural beauty visible from major travel corridors as well as from public trails, streets, and parks. Due to its topography, parts of Mission Canyon are highly visible from areas of the City of Santa Barbara and the South Coast. Major view corridors within Mission Canyon include Mission Canyon, Tunnel and Las Canoas roads, and State Route 192 (Foothill Road). With few street lights and minimal night-lighting, Mission Canyon offers spectacular views of the nighttime sky (Santa Barbara County 2008a).

The project area is visible from a short segment of Highway 192 where it crosses Mission Creek. No other public roads with views of the project site are present in the area. Views from residences in the area are generally obscured by intervening vegetation.

### **CEQA Thresholds of Significance**

A significant Aesthetic impact would be expected to occur if the proposed project resulted in any of the impacts noted in the above checklist. Additionally, the County of Santa Barbara's *Environmental Thresholds & Guidelines Manual* (Santa Barbara County 2008b) instructs the project evaluator to assess visual/aesthetic impacts through a two step process. First, the visual resources of the project site must be evaluated including the physical attributes of the site, its visual uniqueness, and its relative visibility from public viewing areas. Of particular concern are visibility from coastal and mountain areas, as well as its visibility from the urban fringe and travel corridors. Secondly, the potential impact of the project on visual resources located onsite and on views in the project vicinity which may be partially or fully obstructed must be determined. This step includes an evaluation of the project's consistency with city and state policies on the protection of visual resources.

No threshold of significance is designated under NEPA analysis (see Plans and Policies Discussion above).

### **Project Impacts/Environmental Consequences**

#### **1.a) Scenic Views**

Due to its location and the density of trees and other landscaping in the project vicinity, the project site would not be visible from a distance. During construction, a few of the trees on the bank would be removed, thereby altering the scenic views of the creek from the residences on the west side of the creek and from Highway 192. Once construction is complete and the bank vegetation restored, local scenic views would no longer be affected. The pipeline would be buried and not visible, and the fish passage pools would be constructed of natural boulders to blend in with the undisturbed portions of the creek. The unnatural concrete apron will also be gone. Impacts under CEQA would be short-term and *less than significant*.

#### **1.b) On-Site Aesthetics**

Implementation of the proposed project would result in an overall long-term beneficial effect on the visual character and quality of the creek bed. However, construction activities would result in short-term effects on the visual character at the project site due to equipment presence and trenching for replacement of the pipeline segment. Under CEQA, these impacts would be temporary and *less than significant* because a small area would be affected and the disturbed areas on the banks would be restored and revegetated as described under biological resources below.

#### **1.c) Lighting**

The proposed project would not require the installation of any large outdoor lights or additional sources of light or glare. Most construction activities would occur during daylight hours and would not require night lighting. However, burial of the bypass pipeline under the Tennis Club driveway would require work for one night. Installation of the line valve could also require night work (up to one week) under emergency conditions. Temporary lighting for this work would be directed at the small work area and would have minimal to no effect on nearby residences due to intervening

vegetation and the short duration of the lighting. Impacts under CEQA would be *less than significant*.

### **No Action Alternative**

The No Action Alternative would not change the existing visual and aesthetic conditions of the site, resulting in *no impacts*.

### **Cumulative Impacts**

The less than significant impacts of the proposed project would be of short duration and would not contribute to cumulative impacts on visual aesthetics.

### **Visual Aesthetics – Mitigation**

No mitigation measures are required or recommended

### **Visual Aesthetics – Residual Impacts**

Residual impacts would be *less than significant*.

<b>8.2 Air Quality</b> Could the project:	<b>NO</b>	<b>YES Level of Significance</b>
a) Violate any air quality standard or contribute to an existing or projected air quality violation?		X - Less than significant
b) Expose sensitive receptors to pollutants?		X - Less than significant
c) Create objectionable odors?		X - Less than significant
Is the project consistent with the County of Santa Barbara Air Quality Attainment Plan? Yes		

### **Air Quality – Discussion**

**Issues:** Air quality issues involve pollutant emissions from vehicle exhaust and industrial or other stationary sources that contribute to smog, particulates and nuisance dust associated with grading and construction processes, and nuisance odors.

Smog, or ozone (O<sub>3</sub>), is formed in the atmosphere through a series of photochemical reactions involving interaction of oxides of nitrogen (NO<sub>x</sub>) and reactive organic compounds (ROC) (referred to as ozone precursors) with sunlight over a period of several hours. Primary sources of ozone precursors in the South Coast area are vehicle emissions. Sources of both inhalable coarse (PM<sub>10</sub>) and fine (PM<sub>2.5</sub>) particulate matter include demolition, grading, road dust, agricultural tilling, mineral quarries, and vehicle exhaust.

The City of Santa Barbara is part of the South Coast Air Basin. The City is subject to the National Ambient Air Quality Standards (NAAQS) and the California Ambient Air Quality Standards (CAAQS), which are more stringent than the national standards. The NAAQS apply to seven pollutants: ozone, carbon monoxide, sulfur dioxide, nitrogen dioxide, PM<sub>10</sub>, PM<sub>2.5</sub>, and lead. Within the City, the Santa Barbara County Air Pollution Control District (SBC APCD) enforces compliance with the ambient air quality standards, and the SBC APCD is responsible for preparation of the County attainment plans. The SBC APCD recently completed the 2007 *Clean Air Plan* (2007

CAP), which demonstrates how the County will maintain the national 8-hour O<sub>3</sub> standard (SBC APCD and Santa Barbara County Association of Governments 2007).

## **Air Quality – Existing Conditions and Project Impacts**

### ***Existing Conditions/Affected Environment***

Presently, Santa Barbara County attains all ambient air quality standards, except the CAAQS for O<sub>3</sub> and PM<sub>10</sub> (California Air Resources Board 2009). However, not enough data are available to determine whether the County attains the national and state PM<sub>2.5</sub> standards.

### ***CEQA Thresholds of Significance***

The pollutants of primary concern that are considered in this MND/EA include ROC, NO<sub>x</sub>, PM<sub>10</sub>, and PM<sub>2.5</sub>. Although there are no ambient air quality standards for ROC or NO<sub>x</sub>, they are important as precursors to O<sub>3</sub> formation. A significant Air Quality impact would be expected to occur if the proposed project exceeds any of the criteria noted in the above checklist.

The project analysis follows the guidance and methodologies recommended in the SBC APCD *Scope and Content of Air Quality Sections in Environmental Documents* (SBC APCD 2007). The SBC APCD has not developed quantitative thresholds of significance for short-term emissions of NO<sub>x</sub> and ROC from construction activities. However, since the County does not attain the CAAQS for PM<sub>10</sub>, construction generated fugitive dust is subject to the SBC APCD standard dust mitigation requirements.

No threshold of significance is designated under NEPA analysis (see Plans and Policies Discussion above).

### ***General Conformity Statement***

Santa Barbara County currently attains all NAAQS, although the region is a maintenance area for the 1-hour O<sub>3</sub> NAAQS. As a result, the proposed action would conform to the State Implementation Plan (SIP) if its annual emissions remain below 100 tons of VOCs (ROCs) or NO<sub>x</sub>. These *de minimis* thresholds apply to both proposed construction and operational activities. If the proposed action exceeds one or more of the *de minimis* thresholds, a more rigorous conformity determination is the next step in the conformity evaluation process. Additionally, regardless of the applicable *de minimis* level, conformity assessments are required for non-exempt “regionally significant” actions, which are defined as projects with direct and indirect emissions that exceed 10 percent of the applicable SIP emissions inventory, regardless of numerical value. SBC APCD Rule 702 adopts the guidelines of the General Conformity Rule.

Construction emissions associated with the proposed action were estimated by comparing proposed emissions to those estimated for a much larger Reclamation project that was recently approved in the Southern Santa Barbara County region. This project includes construction of about 8,000 feet (2,438\_m) of 48-inch diameter water pipeline and is part of upgrades to the South Coast Conduit located in Glen Annie Canyon, north of the City of Goleta. Annual construction emissions estimated for that action in the FEIS/FEIR amounted to 5.2/0.3 tons of NO<sub>x</sub>/VOCs (Reclamation and COMB 2009). Therefore, conformity-related emissions associated with construction of the proposed Mission Creek South Coast Conduit Crossing would not exceed the applicable annual *de minimis* thresholds of 100 tons of VOCs or NO<sub>x</sub>. Additionally, these nominal amounts of emissions would not

exceed 10 percent of the applicable SIP emissions inventory. Therefore, the proposed action would conform to the most recent federally-approved SIP.

### **Project Impacts/Environmental Consequences**

#### **2.a) Contribute to an Exceedance of an Ambient Air Quality Standard**

The proposed project would produce combustive emissions due to the use of fossil fuel-powered mobile equipment. Additionally, earth-moving activities and the movement of equipment on unpaved surfaces could produce uncontrolled fugitive dust emissions at a rate of about 55 pounds of PM<sub>10</sub> per day per acre of disturbed land (U.S. Environmental Protection Agency [USEPA] 1995). Construction activities would only require the concurrent operation of a few pieces of construction equipment. Due to the mobile and intermittent nature of these sources, their emissions would not contribute to substantial ambient impacts at any location. Implementation of County standard dust control measures (identified in the project description) typically reduces fugitive dust emissions from uncontrolled levels by at least 50 percent. Proposed construction activities would not contribute to an exceedance of an ambient air quality standard, and impacts under CEQA would be *less than significant*. Additionally, implementation, where feasible, of combustive emission reduction measures recommended by the SBC APCD (identified in Air Quality Mitigation Measure AQ-1) would further minimize the impact of these emissions.

#### **2.b) Expose sensitive receptors to pollutants**

The impact of air emissions to sensitive members of the population is a special concern. Sensitive receptor groups include children and infants, pregnant women, the elderly, and the acutely and chronically ill. The locations of these groups include residences, schools, playgrounds, daycare centers, and hospitals. Residences occur as close as 50 feet (15 m) to the proposed construction site. Since construction activities would only require the concurrent operation of a few pieces of construction equipment, their nominal emissions (both combustive and fugitive dust) would substantially disperse by the time they reach the nearest residents. Proposed construction activities would not expose sensitive receptors to substantial pollutant concentrations, and impacts under CEQA would be *less than significant*.

#### **2.c) Odors**

Proposed construction activities would increase air pollutants mainly due to the combustion of diesel fuel. Some individuals may sense that diesel combustion emissions are objectionable in nature, although quantifying the odorous impacts of these emissions to the public is difficult. As discussed above, proposed construction equipment would produce a nominal amount of combustive emissions over an intermittent time frame. These emissions would quickly disperse to below objectionable odor levels prior to contact with the public. As a result, proposed construction activities would not create objectionable odors that affect a substantial number of people, and impacts under CEQA would be *less than significant*.

### **Consistency with the Clean Air Plan:**

Future construction emissions are accounted for in the 2007 CAP emissions growth assumptions. Additionally, with the implementation of County standard dust control measures described in the project description under control measures, proposed construction activities would be consistent with the 2007 CAP and City policies.

### **No Action Alternative**

The No Action Alternative would not change the existing air quality conditions of the site, resulting in *no impacts*.

### **Cumulative Impacts**

Santa Barbara County currently attains all ambient air quality standards except the State O<sub>3</sub> and PM<sub>10</sub> standards. These nonattainment conditions for ambient O<sub>3</sub> and PM<sub>10</sub> within the project region are therefore cumulatively significant. Reasonably foreseeable future projects that would overlap in time with the project would contribute to these significant cumulative impacts.

Emissions of O<sub>3</sub> precursors and PM<sub>10</sub> emissions from the proposed construction activities, in combination with emissions from future sources and approved projects in the region, would exacerbate the existing O<sub>3</sub> and PM<sub>10</sub> nonattainment conditions within the County. However, all construction activities would be required to implement standard County dust control measures and construction emissions are included in the County air attainment planning process. As a result, proposed construction activities would produce *less than significant* cumulative impacts.

Greenhouse gases (GHGs) are gases that trap heat in the atmosphere. These emissions occur from natural processes and human activities. The accumulation of GHGs in the atmosphere regulates the earth's temperature. Scientific evidence indicates a trend of increasing global temperature over the past century due to an increase in GHG emissions from human activities. The climate change associated with this global warming is predicted to produce negative economic and social consequences across the globe.

Due to the use of fossil fuel-fired construction equipment, the project would generate GHG emissions, mainly in the form of carbon dioxide. However, due to the relatively low level of proposed construction equipment usage, the cumulative contribution of project GHGs to climate change would be negligible and immeasurable.

### **Air Quality – Mitigation**

**AQ-1 Construction Equipment Combustive Emissions Control.** The following are recommended, where feasible, during project grading and construction to reduce combustive emissions from construction equipment:

- a. Heavy-duty diesel-powered construction equipment manufactured after 1996 (with federally mandated "clean" diesel engines) shall be utilized wherever feasible.
- b. The engine size of construction equipment shall be the minimum practical size.
- c. The number of construction equipment operating simultaneously shall be minimized through efficient management practices to ensure that the smallest practical number is operating at any one time.
- d. Construction equipment shall be maintained in tune per the manufacturer's specifications.
- e. Construction equipment operating onsite shall be equipped with two to four degree engine timing retard or pre-combustion chamber engines.
- f. Catalytic converters shall be installed on gasoline-powered equipment, if feasible.



- g. Diesel catalytic converters, diesel oxidation catalysts and diesel particulate filters as certified and/or verified by USEPA or California shall be installed, if available.
- h. Diesel powered equipment shall be replaced by electric equipment whenever feasible.
- i. Idling of heavy-duty diesel trucks during loading and unloading shall be limited to five minutes; auxiliary power units shall be used whenever possible.

### Air Quality – Residual Impacts

Residual impacts would be *less than significant*, and Mitigation Measure AQ-1 would further reduce those impacts.

<b>8.3 Biological Resources</b> Could the project result in impacts to:	<b>NO</b>	<b>YES Level of Significance</b>
a) Endangered, threatened or rare species or their habitats (including but not limited to plants, fish, insects, animals, and birds)?		X - Potential to be significant but mitigable
b) Locally designated historic, Landmark or specimen trees?	X	
c) Natural communities (e.g. oak woodland, coastal habitat, etc.).		X - Less than significant
d) Wetland habitat (e.g. marsh, riparian, and vernal pool)?		X - Potential to be significant but mitigable
e) Wildlife dispersal or migration corridors?		X - Potential to be significant but mitigable

### Biological Resources – Discussion

**Issues:** Biological resources issues involve the potential for a project to substantially affect biologically-important natural vegetation and wildlife, particularly species that are protected as rare, threatened, or endangered by federal or state wildlife agencies and their habitat; wetlands and other natural plant communities; wildlife migration corridors; and native specimen trees and designated landmark or historic trees.

### Biological Resources – Existing Conditions and Project Impacts

#### **Existing Conditions/Affected Environment**

Mission Creek contains flowing water throughout the year with releases from Gibraltar Reservoir to maintain flow in the dry season. The substrate of the creek bed is composed of cobbles and gravel with scattered boulders. The banks are steep, densely vegetated, and lined with trees that create a closed canopy over the canyon. The understory vegetation is scattered but dense in places, and emergent aquatic vegetation is isolated and sparse. A large scour pool is present on the downstream side of the bridge, primarily due to the concrete apron adjacent to the bridge. The banks of this pool are eroding due to water flow off the concrete apron. The pool is 2 to 3 feet (0.6 to 0.9 meter) deep during low flow conditions with an undercut eroded beneath the concrete apron. A number of smaller natural pools are present upstream and downstream of the bridge.

The creek provides potential habitat for the California red-legged frog (*Rana aurora draytonii*), a federally listed threatened species. The creek also provides suitable habitat for steelhead, a federally

listed endangered species. A wetland delineation was conducted to determine the boundaries of wetland resources. Details on survey methods, including survey times and personnel, are included in the Biological Resources Survey Report prepared by SAIC, February 2009, and included as Attachment D.

**Vegetation.** Upland vegetation in the vicinity of the work area is mostly non-native, consisting of landscape plants at adjacent developed sites or that have escaped from cultivated areas. Native trees adjacent to the creek in the work area consist of coast live oak (*Quercus agrifolia*), western sycamore (*Platanus racemosa*), white alder (*Alnus rhombifolia*), arroyo willow (*Salix lasiolepis*), and sandbar willow (*Salix exigua*). Most of the native riparian trees (excludes oaks) in close proximity to the work site are relatively small, less than 6 inches (15 cm) in stem diameter, with the exception of one 8-inch (20 cm) western sycamore at the southwest side of the bridge. Non-native trees adjacent to the creek consist of Japanese pittosporum (*Pittosporum tobira*), eucalyptus (*Eucalyptus* sp.), and acacia (*Acacia* sp.). Tree locations and sizes are provided in the Biological Resources Report (Attachment D, Figure 2 and Table 2). Scattered shrubs, vines, and herbaceous plants, both native and non-native, are also present along the banks of the creek. Native species included mulefat (*Baccharis salicifolia*), California blackberry (*Rubus ursinus*), poison oak (*Toxicodendron diversilobum*), rush (*Juncus* sp.), umbrella sedge (*Cyperus eragrostis*), horsetail (*Equisetum* sp.), and leather root (*Hoita macrostachya*). Non-native species included rabbitsfoot grass (*Polypogon monspeliensis*), English ivy (*Hedera helix*), and mint (*Mentha* sp.).

The staging area southwest of the Tennis Club parking lot has a mix of annual and perennial grasses and herbs that are characteristic of disturbed habitats. Species present include horseweed (*Conyza canadensis*), Bermuda grass (*Cynodon dactylon*), and spurge (*Euphorbia* sp.). Non-native trees around the margins of the staging area are predominantly eucalyptus (*Eucalyptus* sp.) and myoporum (*Myoporum laetum*). Several native western sycamore and coast live oak are also present.

**Wetlands.** Wetland delineations using the U.S. Army Corps of Engineers (USACE) Manual (Environmental Laboratory 1987) and the Arid West Supplement (USACE 2008) were performed at all locations containing potential wetlands. This approach requires sites to meet a set of criteria for each of three parameters (wetland soils, hydrology, and vegetation) to be considered a federal wetland under the USACE jurisdiction. In addition, federal Waters of the U.S. were determined with consideration of recent guidance from the USEPA and the USACE districts on implementing the Supreme Court's decision in the consolidated cases *Rapanos v. United States* and *Carabell v. United States*. The extent of federal wetlands and Waters of the U.S is depicted in Attachment D, Figure 2.

Downstream of the Highway 192 Bridge, Mission Creek is deeply incised and composed mostly of cobbles and boulders with occasional chunks of concrete and other debris. Waters of the U.S. were mapped based on evidence of flow (e.g., drift lines, water marks, shelving, and a change in vegetation) and are about 30 feet (9 m) wide on average (see Attachment D, Figure 2 for limits of waters of the U.S. within the project area). No federal wetlands were present downstream of the bridge; the substrate is too rocky and flows are too turbulent to support wetland vegetation.

The Porter-Cologne Water Quality Control Act and the Central Coast Regional Water Quality Control Board (CCRWQCB) Basin Plan allow the CCRWQCB to evaluate potential pollutant discharges into wetlands as defined by the State of California. In the State of California and in Santa Barbara County, wetlands are defined using the same approach as the USACE, although sites are

required to meet the set of criteria for only one of the three parameters (wetland soils, hydrology, and vegetation) to be considered a State wetland. This definition allows for areas such as seasonal wetlands to be considered during environmental review of a project. For the project site, the boundaries of the State wetlands include the extent of both the federal wetlands and Waters of the U.S. as depicted in Attachment D, Figure 2.

**Wildlife (Terrestrial and Aquatic).** Aquatic invertebrates were commonly observed on and under the cobbles, including giant water bug (*Abedus indentatus*), water boatman (*Trichocorixa reticulata*), water strider (*Gerris remigis*), and water scavenger beetle (*Tropisternus ellipticus*). Pacific chorus frogs (*Pseudacris regilla*) were seen or heard on several of the red-legged frog surveys. During the first survey, juveniles of this species with legs and long tails were found downstream of the bridge. The only fish observed were juvenile trout (see Special Status Species below) and one goldfish (*Carassius auratus*). The latter was in the large pool just below the bridge.

Several avian species were observed along the riparian corridor of Mission Creek during the day and night surveys, including western tanager (*Piranga ludoviciana*), oak titmouse (*Baeolophus ridgwayi*), California towhee (*Pipilo crissalis*), spotted towhee (*Pipilo maculatus*), lesser goldfinch (*Carduelis psaltria*), black phoebe (*Sayornis nigricans*), mourning dove (*Zenaidura macroura*), acorn woodpecker (*Melanerpes formicivorus*), and great horned owl (*Bubo virginianus*). A number of non-sensitive bird species are expected to nest within the riparian habitat, and these birds and their nests are protected under the MBTA (16 USC §703 *et seq.*).

Big brown bats (*Eptesicus fuscus*) and California myotis (*Myotis californicus*) were observed roosting under the bridge in the narrow space between a large pipeline and a vertical concrete bridge support. A large pile of guano was found on the cement abutment beneath the location, indicating long-term use of the site. Raccoon (*Procyon lotor*) and domesticated black and white rat (*Rattus norvegicus*) were also observed along the banks of the creek during the night surveys. Other wildlife species that may use the creek corridor include striped skunk (*Mephitis mephitis*) and coyote (*Canis latrans*).

**Special Status Species.** Special status species are those that are state- or federally- listed as threatened or endangered, candidates or species proposed for such listing (including habitat that has been designated or proposed for designation as critical under the federal ESA), state Species of Special Concern (SSC), or California Native Plant Society (CNPS) List 1B. A search of the California Natural Diversity Data Base (CNDDB) (CDFG 2008) and other literature sources as well as field surveys of the project area indicate that several special status species could be present (Table 1)

**Table 1. Special Status Species Potentially Present in Project Area**

Common Name	Scientific Name	Status		Notes
		Federal	State	
Southern California ESU steelhead	<i>Oncorhynchus mykiss irideus</i>	E	SSC	Observed in Mission Creek during surveys in 2008 (Attachment D).
Southern California ESU steelhead critical habitat	<i>Oncorhynchus mykiss irideus</i>	CH designated		Final critical habitat designated September 2, 2005.

**Table 1. Special Status Species Potentially Present in Project Area**

California red-legged frog	<i>Rana aurora draytonii</i>	T	SSC	Potential habitat in Mission Creek, none observed during protocol surveys.
Southwestern pond turtle	<i>Actinemys marmorata pallida</i>	--	SSC	Potential habitat in Mission Creek.
Two-striped garter snake	<i>Thamnophis hammondi</i>	--	SSC	Potential habitat in Mission Creek.
Yellow warbler	<i>Dendroica petechia brewsteri</i>	--	SSC (nesting)	Potential nesting habitat in dense trees near Mission Creek bridge.
Cooper's hawk	<i>Accipiter cooperii</i>	--	WL (nesting)	Potential habitat in Mission Creek.
<b>Notes:</b> Federal (USFWS & NMFS): T      Federally listed as Threatened E      Federally listed as Endangered State (CDFG): SSC   California Species of Special Concern WL    Watch List <b>Sources:</b> CDFG 2008, NMFS no date.				

No rare, threatened, endangered, or sensitive plant species were observed during surveys, nor are they expected to be present. Habitat is marginal for any of the sensitive plant species identified during the literature search, and sensitive plant species should have been detectable at the time of the field surveys.

*California red-legged frog.* Habitat assessment indicated that the creek provides potential habitat for the California red-legged frog. Because California red-legged frogs could be present at the project site, protocol surveys were conducted to determine the presence or absence of this species. Protocol surveys (2 day and 4 night) were conducted along the creek extending approximately 300 feet down and upstream of the bridge from August 15 to October 22, 2008 (see Attachment D). Although water is present for much to all of the year in the creek and suitable habitat is present along Mission Creek in the project area, no California red-legged frogs were heard or observed on any of the surveys. Therefore, no California red-legged frogs are anticipated to occur in the project area. Mission Creek is not in the designated critical habitat for this species (USFWS 2006, 2008).

*Steelhead.* Mission Creek in the project area provides suitable habitat for steelhead or rainbow trout (same species with different life history). This species was observed in the creek during most of the surveys. Individuals included small young-of-the-year and larger one to two year old fish. These fish were observed in the larger pools below boulders and in the smaller riffles between pools. However, the concrete apron on the downstream side of the Highway 192 Bridge has been identified as an extremely high to impassable barrier to upstream movement of steelhead. Six partial and complete barriers are present downstream of the project area and include concrete channels associated with roads and the Union Pacific Railroad (UPRR) and bridge aprons and grade control structures (Stoecker 2002). Because of the migratory restrictions, the fish observed along Mission Creek could be the federally-listed steelhead or resident rainbow trout.

The project area is within the Southern California Evolutionarily Significant Unit (ESU) for steelhead that includes coastal drainages south from (and including) the Santa Maria River. Mission Creek, including the project area, is within designated critical habitat for this species (NMFS 2005).

*Southwestern pond turtle and two-striped garter snake.* The southwestern pond turtle and two-striped garter snake have the potential to occur along Mission Creek. Suitable habitat is present, and both species have been reported within three miles of the project area. However, neither species was observed during the six protocol surveys for California red-legged frog and therefore are unlikely to occur in the immediate project area during the temporary construction phase of the proposed project.

*Yellow warbler.* Yellow warbler could potentially utilize riparian trees adjacent to the Highway 192 Bridge, but the habitat at that location is of marginal quality for nesting. Yellow warbler is classified by the CDFG as SSC while nesting. This species prefers dense, mature willow scrub and riparian forests for nesting. The yellow warbler may occur as a transient and summer resident in the area (Lehman 1994).

*Cooper's hawk.* Cooper's hawk has been known to nest along Mission Creek about one mile downstream of the project site at Oak Park. Cooper's hawk is likely to forage in the project vicinity and could utilize the trees in the riparian corridor along Mission Creek in the project area.

### **CEQA Thresholds of Significance**

A significant impact on Biological Resources would be expected to occur if the proposed project resulted in any of the impacts noted in the above checklist. Additional thresholds are contained in the County of Santa Barbara's *Environmental Thresholds & Guidelines Manual* (Santa Barbara County 2008b).

The County's adopted thresholds of significant environmental impact(s) for biological resources indicate the potential for a significant impact if a proposed project would result in any of the following:

- a) Conflict with adopted environmental plans and goals of the community where it is located;
- b) Substantially affect a rare or endangered plant or animal species;
- c) Substantially interfere with the movement of any migratory or resident fish or wildlife species;
- d) Substantially diminish habitat for fish, wildlife, or plants.

Of these, only a) is not covered specifically in the checklist and will be addressed as 3.f) below.

No threshold of significance is designated under NEPA analysis (see Plans and Policies Discussion above).

### **Project Impacts/Environmental Consequences**

#### **3.a) Endangered, threatened, or rare species**

Although the proposed project would have long-term benefits to rare, threatened, or endangered wildlife species (specifically steelhead), short-term impacts would occur during construction activities.

Steelhead or rainbow trout are present in the project area and would be affected by construction activities in the creek (removal of the concrete apron, relocation of the pipeline, and improving the fish passage). Individuals within the work area would be captured and relocated to a safe location upstream of the project. Installation of the water diversion system for construction would disturb habitat at the upstream and downstream ends of the diversion. Such disturbances in the channel would result in a temporary increase in turbidity in the stream. Dewatering of the pipeline trench from subsurface flows would also have the potential to increase turbidity downstream of the work area. Impacts under CEQA would be *significant but feasibly mitigated*. Effects under NEPA would be insignificant, although a Biological Opinion from the National Marine Fisheries Service (NMFS) would be required.

The California red-legged frog was not found during protocol surveys conducted for this project. Based on these observations, no California red-legged frogs are anticipated to be present at the construction site for the fish passage improvement and pipeline relocation project. *No impact* would occur to this species.

The southwestern pond turtle and two-striped garter snake have the potential to occur along Mission Creek but were not observed during surveys and, thus, are unlikely to occur in the immediate project area during the short construction phase. Disturbance related to construction (e.g., noise and human presence) would likely cause any individual of these species to avoid the work area. Few, if any, individuals would be affected and impacts under CEQA would be *less than significant*.

Yellow warbler and Cooper's hawk could potentially forage and nest in the riparian corridor adjacent to the Highway 192 Bridge. Disturbances during construction to the trees and vegetated banks of Mission Creek would have the potential to impact foraging and nesting of these sensitive birds as well as other non-sensitive birds protected under the MBTA. Construction is scheduled for late fall, which is after the nesting season for both species. The amount of foraging area affected represents a small proportion of the available foraging habitat in the area, and any individuals present could temporarily move to other areas for foraging. Impacts under CEQA would be *less than significant*.

No sensitive plant species were found or are expected to occur within the project area or staging area; therefore, *no impacts* would occur to sensitive plant species.

### **3.b) Landmark or Specimen Trees**

No landmark or specimen trees would be removed or damaged during construction of the project. *No impacts* would occur.

### **3.c) Natural Communities**

Large trees and shrubs will be protected to the maximum extent feasible to retain shade and bank slope protection and minimize impact to wildlife habitat. The proposed project would remove three non-native *Eucalyptus* and *Acacia* trees and two coast live oaks. The oak trees are 5 inches (12.7 cm) in diameter, both below the protected size of 6 inches (15 cm) or greater. The loss of these trees would not substantially degrade the natural plant communities or decrease the wildlife utilization of the area. One coast live oak with three 7-inch (17.8-cm) trunks is located within 10 feet (3 m) of the pipeline on the east bank, and trenching for pipeline replacement would affect its root zone and possibly require removal of the tree. Native riparian vegetation (less than 0.05 acre, 0.02 hectare),

primarily poison oak and willow saplings with one sycamore tree, on the banks of the creek would be removed during construction. This native vegetation and the coast live oaks would be replaced after construction as described in Mitigation Measure BIO-2. Impacts under CEQA would be *significant but feasibly mitigated*.

Project activities within the staging area would be in previously disturbed areas. No trees would be removed within the staging area, although some non-native trees would be pruned to allow access of large equipment/trucks. Storage of materials or equipment within the dripline of the native trees could adversely affect these trees, a *significant but feasibly mitigated* impact (see Mitigation Measure BIO-2).

### **3.d) Wetlands**

Federal and state wetlands would be temporarily affected during project construction. The small wetland located just upstream of the bridge could be disturbed by installation of the temporary diversion structure during construction. State wetlands and Waters of the U.S. would be disturbed during construction, which includes temporary diversion of flows from the creek. Any wetland vegetation and hydrology impacted during construction would be restored once construction is complete. Impacts under CEQA would be *significant but feasibly mitigated*.

### **3.e) Wildlife Dispersal or Migration Corridors**

Diversion of creek flow around the work space during construction would interfere with movement through this area of aquatic organisms such as trout. This would be temporary, and once the project is completed, the movement corridor for aquatic species would be improved by replacement of the concrete in the channel with step pools. The diversion would occur in the fall prior to the winter rains that trigger steelhead migration to spawn. Thus, no migratory individuals would be present at that time. Movement of birds and mammals in the riparian corridor would not be adversely affected due to the timing and short duration of construction. Short-term impacts under CEQA would be *less than significant* and long-term impacts would be beneficial.

### **3.f) Environmental Plans and Goals of the Community**

The project would not conflict with local plans or policies for protection of biological resources. The few native trees removed during construction would be replaced (see mitigation measure BIO-2). Although the project does not include new development or changes in land use, the project does support the biological resources goals and policies of the MCCP for the enhancement of native habitats, including habitat for southern steelhead (Santa Barbara County 2008a). Impacts under CEQA would be *less than significant*.

### **No Action Alternative**

Under the No Action Alternative, the fish passage improvements would not be installed and the habitat would continue to degrade. The SCC would still be at risk from damage and release of treated water into the creek with the potential for significant and unavoidable impacts to downstream biological resources. The beneficial impacts associated with improving fish passage would not be realized.

### **Cumulative Impacts**

No current or proposed cumulative projects have been identified that would also affect Mission Creek. Past projects, however, have adversely affected the creek, including installation of the concrete apron on the downstream side of the Highway 192 Bridge. All significant project impacts would be mitigated to less than significant and the residual project effects would not contribute considerably to cumulative impacts on biological resources.

### **Biological Resources – Mitigation**

- BIO-1 Preconstruction surveys.** As close to the beginning of construction as possible, but not more than 14 days prior to construction, a qualified biologist shall conduct a final pre-activity survey of the construction zone to ensure that no special status wildlife species have recently occupied the site. Before construction activities begin in the creek channel, all fish and amphibians in the work area shall be relocated to suitable habitat in the creek (upstream and/or downstream) by a qualified biologist. This activity shall be in conformance with all conditions in project permits and biological opinions.
- BIO-2 Riparian Trees.** Native trees and shrubs shall be protected to the maximum extent feasible to retain shade and bank slope protection and minimize impact to wildlife habitat. Native trees (excluding willows) 6 inches (15 cm) or greater in trunk diameter shall be replaced at a ratio of 10 for each tree removed, and willows 3 inches (7.5 cm) or greater in diameter shall be replaced at a ratio of 5 per tree removed, or as specified in project permit conditions. The two small coast live oaks to be removed shall be replaced at a ratio of three for each tree removed. The dripline of the native trees around the staging area shall be clearly marked, and no activities will occur within the dripline.
- BIO-3 Construction Window.** In-channel construction activities shall be limited to the fall low-flow period (September 1<sup>st</sup> – November 1<sup>st</sup>) to reduce the potential for impacts on nesting birds, aquatic species, and water quality. Work shall be conducted during daylight hours.
- BIO-4 Restoration.** After construction is completed, the stream banks and adjacent areas disturbed by construction activities shall be stabilized and revegetated, as described in the project description, to avoid increased erosion during subsequent storms and runoff. Native plants or seed used in revegetation shall be from local (same watershed or south coast) plant sources. Specific performance criteria shall be developed for all revegetation.
- BIO-5 Environmental Training.** A construction worker education program shall be implemented that includes a description of all sensitive environmental resources, including special status species, nesting birds, their identification, avoidance measures that are part of the project, protocol to be followed if any of these species are found in the work area, and federal and state laws that protect the species.
- BIO-6 Permits.** COMB shall secure appropriate permits from the USACE, CDFG, and RWQCB. COMB will comply with any additional measures imposed as permit conditions beyond those in this document. A Biological Opinion from NMFS under section 7 of the ESA will be required.

Mitigation measures HAZ-1 and WQ-1 would also apply.



## Biological Resources – Residual Impacts

Implementation of the Mitigation Measures described above would reduce short-term biological impacts during the construction period to *less than significant*. Long-term impacts after the construction is completed would be *beneficial* to fish migration and passage to the upper Mission Creek watershed.

<b>8.4 Cultural Resources</b> Could the project:	<b>NO</b>	<b>YES</b> <b>Level of Significance</b>
a) Disturb archaeological resources?		X - Potential to be significant, but mitigable
b) Affect a historic structure or site designated or eligible for designation as a National, State or City landmark?		X - Potential to be significant, but mitigable
c) Have the potential to cause a physical change which would affect ethnic cultural values or restrict religious uses in the project area?	X	

## Cultural Resources – Discussion

**Issues:** Archaeological resources are subsurface deposits dating from Prehistoric or Historical time periods. Historic resources are above-ground structures and sites from historical time periods with historic, architectural, or other cultural importance. Archeological and historic resources are protected by state and local law.

The National Historic Preservation Act requires that the heads of all Federal agencies shall assume responsibility for the preservation of historic properties which are owned or controlled by their agency. Historic properties are considered to include all properties listed in the National Register and to properties meeting eligibility criteria specified in 36 CFR Section 60.4. The project area lies within the historic territory of groups belonging to the Native Americans collectively known as the Chumash. The Chumash occupied the region from San Luis Obispo to Malibu Canyon on the coast and the northern Channel Islands, and inland as far as the western edge of the San Joaquin Valley. The project area is located within the historic Barbareño territory. The Barbareño occupied the narrow coastal plain from Point Conception to Punta Gorda in Ventura County. At the time of contact, the Barbareño were organized into large towns along the coast and were involved in extensive trade networks (Johnson 1988).

Spanish explorers and eventual settlements in Santa Barbara occurred in the 1500's through 1700's. In the mid-1800's, the City began its transition from a Mexican village to an American city, and in the late 1800's through early 1900's experienced intensive urbanization. The City's built environment has a rich cultural heritage with a variety of architectural styles, including the Spanish Colonial Revival style emphasized in the rebuilding of Santa Barbara's downtown following a destructive 1925 earthquake.

A records search was conducted by Stone Archaeological Consulting at the Central Coastal Information Center at the University of California, Santa Barbara. This search included a review of all recorded archaeological sites within a 1/8 mile (0.2 km) radius of the project area, as well as a review of cultural resource reports on file. The Information Center records indicate that three prior surveys have been undertaken, and one archaeological site has been recorded within the project area.

Five archaeological sites have been identified and one previous cultural resource surveys have been performed within 1/8 mile (0.2 km) of the project site. The Santa Barbara City Master Environmental Assessment (MEA) Guidelines for Archaeological Resources and Historic Structures and Sites (January 2002) Section 1.4 and Appendix A, pages A-5 through A-7, were reviewed to determine the nature of previous land uses on the project site. A Phase I archaeological survey was conducted by Stone Archaeological Consulting on May 27, 2007. Based on the results of the 100 percent pedestrian survey of the project area, which provided excellent visibility of the ground surface, it was determined that the potential for encountering archaeological resources during project construction was considered very low. In addition, this conclusion was founded on background research evidence that extensive ground disturbance of the project area occurred when the bridge was initially constructed (Stone 2007).

## **Cultural Resources – Existing Conditions and Project Impacts**

### ***Existing Conditions/Affected Environment***

The Central Coastal Information Center records search results were mapped and compared to the project location map. Based on this comparison, one known historic property is present on the lands within the project site; however, the historic property does not meet any of the criteria for listing on the National Register of Historic Places (Criterion A, B, C, or D). This property, CA-SBA-1959 H, is an historic sandstone quarry site consisting of multiple loci along the upper stretches of Mission and Rattlesnake creeks. The site was originally recorded by M. Macko and N. Rhodes in 1985. It currently is incorporated into the western abutment of the Mission Creek Bridge on Highway 192. One prehistoric site and burial area (CA-SBA-1848) is located 410 feet (125 meters) northwest of the project location (Stone 2007).

### ***CEQA Thresholds of Significance***

A significant impact on Cultural Resources would be expected to occur if the proposed project resulted in any of the impacts noted in the above checklist. Additional thresholds are contained in the City's *Environmental Thresholds & Guidelines Manual*.

The City's adopted thresholds indicate that a project would result in a significant impact on a cultural resource if it results in the physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of such a resource would be materially impaired.

No threshold of significance is designated under NEPA analysis (see Plans and Policies Discussion above).

### ***Project Impacts/Environmental Consequences***

#### **4.a-b) Archaeological/Historic Resources**

Because project construction would occur in an active stream channel which has been previously disturbed during construction of the bridge and apron, as well as installation of the South Coast Conduit, it is unlikely that archaeological or historic resources would be impacted by project construction. No structures affected by the proposed project are considered to be a historic property under 36 CFR 60.4, and no archeological sites are recorded or are expected within the project construction area. (The bridge abutments for the existing bridge would not be affected by project

construction.) The proposed project, therefore, would not affect areas that contain or are likely to contain significant archeological resources, historic architectural resources, or traditional cultural resources. Impacts under CEQA would be *less than significant*.

If a determination of “no historic properties affected” for the proposed project is concurred upon by the California SHPO, no further compliance (i.e., Indian tribal consultation, monitoring, or a data recovery [mitigation] strategy) under Section 106 or 36 CFR 800 would be required.

However, known archaeological or historic resources are present within or in close proximity to the project site, and if cultural resources were encountered during project construction, impacts under CEQA would have the potential to be *significant but feasibly mitigated*.

#### **4.c) Ethnic/Religious Resources**

No known ethnic resources or religious use would be affected by the project.

#### **No Action Alternative**

Under the No Action Alternative, the fish passage improvement and pipeline relocation project would not occur. As a result, stream bank erosion would continue, and high stream flows could expose and damage cultural resources immediately adjacent to the water. Impacts on cultural resources under CEQA would have the potential to be significant.

#### **Cumulative Impacts**

In the most likely case, the project would not affect cultural resources, and therefore, would not contribute to cumulative impacts. If any cultural resources were discovered during project construction, the impacts to these resources would be mitigated so that the project would not contribute to cumulative impacts.

#### **Cultural Resources – Mitigation**

**CR-1 Archaeological Monitoring.** An archeological monitor shall be present during all excavation construction activities outside the active stream channel. If any earth-moving activities uncover artifacts, exotic rock, or unusual amounts of bone or shell, work shall be halted in the immediate area of the find and shall not be resumed until Reclamation has been notified and the appropriate Section 106 consultation, if any, can be initiated by Reclamation.

**CR-2 Discovery of Human Remains.** If during construction, bone is uncovered that may be human; the Native American Heritage Commission in Sacramento and the Santa Barbara County Coroner shall be notified. Should human remains be found, the Coroner’s office shall be immediately contacted and all work halted until final disposition by the Coroner. Should the remains be determined to be of Native American descent, the Native American Heritage Commission shall be consulted to determine the appropriate disposition of such remains. If prehistoric or other Native American remains are encountered, a Native American representative shall be consulted, and the archaeologist and Native American representative shall monitor all further subsurface disturbances in the area of the find.

## Cultural Resources – Residual Impacts

Implementation of the Mitigation Measures described above would minimize cultural resources impacts to *less than significant*.

<b>8.5 Geophysical Conditions</b> Could the project result in or expose people to:	<b>NO</b>	<b>YES Level of Significance</b>
a) Seismicity: fault rupture?	X	
b) Seismicity: ground shaking or liquefaction?	X	
c) Seismicity: seiche or tsunami?	X	
d) Landslides or mudslides?	X	
e) Subsidence of the land?	X	
f) Expansive soils?	X	
g) Excessive grading, erosion, or permanent changes in the topography?		X – Potential to be significant, but mitigable

## Geophysical Conditions – Discussion

**Issues:** Geophysical impacts involve potential changes to geologic and soil conditions, as well as the potential to create physical hazards affecting persons or property. Included are earthquake-related conditions such as fault rupture, groundshaking, liquefaction, or tsunamis; unstable soil or slope conditions, such as landslides, subsidence, expansive soils, compressible/collapsible soils, or erosion; and extensive grading or topographic changes.

## Geophysical Conditions – Existing Conditions and Project Impacts

### Existing Conditions/Affected Environment

**Topography.** The site is located in the foothills of the Santa Ynez Mountains, with an existing slope of 4.5 percent through the project site. The existing creek banks within the project site are approximately 12 to 18 feet (4 to 6 m) in height and moderately steep to locally vertical. The creek bottom is approximately 35 feet (11 m) wide in the vicinity of the scour pool (i.e., the area closest to the bridge and existing concrete apron), narrows to approximately 25 feet (8 m) wide immediately downstream of the scour pool, and widens again to approximately 50 feet (15 m) in the lower reaches of the project area. Long-term degradation of the channel profile has caused perching of the existing concrete apron downstream of the Highway 192 Bridge.

**Seismic/Geologic Conditions.** The project site is located on Holocene stream channel deposits, consisting primarily of sand and gravel (Dibblee 1986). The channel sediments exhibit a well-armored bedload with an approximate  $D_{50}$  of 3 inches (80 mm). The channel bedload is generally dominated by small- to medium-size cobbles in the 2- to 6-inch (50- to 150-mm) class. Scattered throughout the bed are large boulders up to several feet in diameter. Between the larger boulders a cobble and medium coarse gravel matrix is present. The channel bedload sediments indicate a well-armored channel with a size class that does not readily mobilize.

The project site is located in a seismically active portion of southern California where strong seismically induced ground motion is expected to occur. However, no active faults that might be capable of surface fault rupture traverse the project site. The closest potentially active fault is the

Mission Ridge Fault, which is located approximately 500 feet (150 m) south of the project site (City of Santa Barbara 1979; Dibblee 1986; Santa Barbara County 1991).

The portion of Mission Canyon in which the project is located is classified as an area of low liquefaction potential (Santa Barbara County 1991). Liquefaction occurs when loose sand and silt that is saturated with water behaves like a liquid when shaken by an earthquake. Steep creek banks, such as those present at the project site, would potentially be subject to lateral spreading during strong earthquakes. Lateral spreading is a form of ground failure in which fracturing and downslope lateral movement of generally unconsolidated sediments occurs, caused by severe seismically induced ground movement.

**CEQA Thresholds of Significance.** Significant geophysical impacts would be expected to occur if the proposed project resulted in any of the impacts noted in the above checklist.

No threshold of significance is designated under NEPA analysis (see Plans and Policies Discussion above).

### **Project Impacts/Environmental Consequences**

#### **5.a) Fault Rupture**

No active faults that might be capable of surface fault rupture traverse the project site. The closest potentially active fault is the Mission Ridge Fault, which is located approximately 500 feet (150 m) south of the project site. Therefore, *no impacts* would occur due to surface fault rupture.

#### **5.b,d,e,f) Seismic Hazards/Geologic or Soil Instability**

Severe seismically induced ground shaking is expected to occur at the project site. However, the project would not include the construction of housing or structures that would expose people to seismic hazards, including liquefaction and lateral spreading. Furthermore, the project does not involve the construction of a foundation or structure that would result in an increased exposure or susceptibility to ground failure, such as landslides, soil creep, mudslides, subsidence, expansive soil, compressible soil, or collapsible soils. Therefore, *no impacts* would occur associated with seismic or non-seismic related ground failure.

#### **5.c) Seiche or Tsunami**

The project site is located approximately 2.6 air miles (3.2 km) from the Pacific Ocean, at an elevation of approximately 450 feet (135 m) above sea level; therefore, tsunami impacts would not occur at the project site. Similarly, the project site is not located in proximity or downstream of a reservoir or water tank that might be susceptible to seiches; therefore, *no seiche-related impacts* would occur.

#### **5.g) Changes in Topography; Grading/Erosion**

**Changes in Topography.** Removal of the concrete apron and excavations for pipeline replacement would result in temporary changes in topography. However, the pipeline trench would be backfilled to near present conditions. In addition, project construction would result in minor alteration of the creek bottom, as well as grading and contouring of the creek banks located adjacent to the proposed concrete apron, thus resulting in minor changes to site topography. No excessive grading or

substantial changes in the topography would occur. Therefore, impacts under CEQA are considered *less than significant*. In addition, such changes in topography would be beneficial to the success of the project and provide a more natural stream channel.

**Grading/Erosion.** The project would involve excavating and temporary stockpiling of soil for pipeline replacement, as well as slope contouring for the proposed fish passage and on the adjacent creek banks. The pipeline trench would be backfilled following construction and excessive grading would not be required for slope contouring. Grading may result in an excess of soil; however, a detailed grading and soil disposal plan would be prepared during final design of the project.

Construction activities, including removal of the existing concrete apron, pipeline replacement, construction of the new grouted rock on the downstream side of the bridge (outside the active channel during low to moderate flows), and slope contouring, would result in vegetation removal, disturbance of soils, and temporary exposure of soils to erosion from wind and water. However, implementation of the project would not result in long-term increases in erosion or soil loss. Upon completion of grading and construction activities, the construction area would undergo a revegetation program. Temporary soil erosion impacts under CEQA are considered *significant but feasibly mitigated*.

#### **No Action Alternative**

Under the No Action Alternative, no changes would occur to the existing concrete apron in Mission Creek and the underlying water pipeline would not be replaced. Geologic processes would not be triggered or accelerated and impacts due to seismicity would remain the same. Therefore, *no* geologic impacts would occur.

#### **Cumulative Impacts**

Projects that result in significant, project-specific, geologic impacts are generally considered to also make a significant contribution to corresponding cumulative impacts. As such, the proposed project would result in a *significant but feasibly mitigated* contribution to cumulative impacts related to erosion.

#### **Geophysical Conditions – Mitigation**

Mitigation measure WQ-1 (see Section 12, Water Environment) shall be implemented to reduce erosion related impacts.

#### **Geophysical Conditions – Residual Impacts**

Implementation of the mitigation measures described in WQ-1 (see Section 12, Water Environment) would minimize short-term impacts to soil erosion and loss of topsoil during the construction period to *less than significant*.

<b>8.6 Hazards</b> Could the project involve:	<b>NO</b>	<b>YES Level of Significance</b>
a) A risk of accidental explosion or release of hazardous substances (including, but not limited to: oil, pesticides, chemicals or radiation)?		X - Potential to be significant, but mitigable
b) The creation of any health hazard or potential health hazards?	X	
c) Exposure of people to existing sources of potential health hazards?	X	
d) Increased fire hazard in areas with flammable brush, grass, or trees?	X	

### **Hazards – Discussion**

**Issues:** Hazards and hazardous substances issues involve the potential for public health or safety impacts from exposure of persons or the environment to hazardous materials or petroleum products; risk of accidents involving combustible or toxic substances; or risk of fire as a result of the project.

### **Hazards – Existing Conditions and Project Impacts**

#### ***Existing Conditions/Affected Environment***

The project site is located in a residential area with limited potential for spills of hazardous materials or petroleum products from adjoining properties. Highway 192 traverses a bridge at the project site; therefore, there is the potential for minor oil and grease to flow into the creek from the roadway during precipitation events.

The project site is located in an area that is susceptible to forest fires, as evidenced by the recent Tea Fire, in November 2008, which burned approximately 1,940 acres (786 hectares) and destroyed 210 homes in the nearby foothills of Santa Barbara. The fire burned to within approximately 3/4 mile (1.2 km) of the project site.

#### ***CEQA Thresholds of Significance***

A significant impact with regard to hazards and hazardous substances would be expected to occur if the proposed project resulted in any of the impacts noted in the above checklist.

No threshold of significance is designated under NEPA analysis (see Plans and Policies Discussion above).

### ***Project Impacts/Environmental Consequences***

#### **6.a) Accidental Spills**

During construction, there is a risk of accidental spills of fuel and/or other petroleum products from construction equipment. In addition, construction materials and equipment wash run-off could be spilled into the creek. Such spills could adversely impact the water quality of Mission Creek. Impacts under CEQA are considered *significant but feasibly mitigated*.

### **6.b,c) Public Health and Safety**

The proposed project would not result in long-term use, storage, or distribution of hazardous or toxic materials that might create a potential health hazard to the public, including nearby residents. The project would not result in public safety hazards associated with development near chemical or industrial activity, producing oil wells, oil/gas pipelines, or toxic disposal sites. The project would not result in the contamination of public water supplies. Therefore, *no* public health and safety impacts would occur.

### **6.d) Fire Hazard**

The project site is located in an area that is susceptible to forest fires; however, the proposed project does not involve the construction of structures or facilities that would present an increased fire hazard. Therefore, *no impacts* would occur.

### **No Action Alternative**

With no construction occurring, *no impacts* associated with hazards would occur under the No Action Alternative.

### **Cumulative Impacts**

Projects that result in significant, project-specific impacts due to hazardous substances and/or petroleum products are generally considered to also make a significant contribution to corresponding cumulative impacts. Although unlikely, the proposed project could result in a *significant but feasibly mitigated* contribution to cumulative impacts through use of fuel and other petroleum products during project construction.

### **Hazards – Mitigation**

**HAZ-1 Contaminant Control.** Detailed plans for prevention and containment of fuel (and/or other petroleum product) spills and construction equipment spills shall be included in the Stormwater Pollution Prevention Plan (SWPPP). The preparation of a SWPPP shall be a line item in the construction contract. Construction plans shall specify all spill control measures that will be used, including (where applicable):

- Properly maintain all construction vehicles and equipment that enter the construction and grading areas, to prevent leaks of fuel, oil, and other vehicle fluids. Vehicles working in the creek bed shall be inspected daily for leaks and immediately repaired if any are found.
- No construction equipment shall be left overnight in the creek channel.
- Where feasible, all refueling and/or maintenance of heavy equipment shall occur at a minimum of 100 feet (30 m) from the top of bank of the creek channel. If the 100-foot (30-m) distance is not feasible, fueling shall be done within a bermed area, with an impervious surface to collect spilled fluids.
- Prepare a spill prevention/spill response plan for the project site that includes training, equipment, and procedures to address spills from equipment, stored fluids, and other materials.



- Place all stored fuel, lubricants, paints, and other construction liquids in secured and covered containers within a bermed area.
- Conduct any mixing and storage of concrete and mortar in contained areas.
- Ensure that all equipment washing and major maintenance is prohibited at the project site, except for wash-down of vehicles to remove dirt, which must only occur in a bermed area.
- Washout of concrete trucks shall be in a designated area that cannot come in contact with or runoff into surface or groundwater.
- Remove all refuse and excess material from the site as soon as possible.

### Hazards – Residual Impacts

Implementation of the mitigation measure described above would reduce short-term impacts associated with potential petroleum and construction material spills, during the construction period, to *less than significant*.

8.7 Noise Could the project result in:	NO	YES Level of Significance
a) Increases in existing noise levels?		X – Potentially to be significant, but mitigable
b) Exposure of people to severe noise levels?		X - Less than significant

### Noise – Discussion

**Issues:** Noise issues are associated with placement of a new noise-sensitive land use in an area subject to high ambient background noise levels, placement of a noise-generating land use next to existing noise-sensitive land uses, and/or short-term construction-related noise.

Ambient noise levels are determined as averaged 24-hour weighted levels, using the Day-Night Noise Level ( $L_{dn}$ ) or Community Noise Equivalence Level (CNEL) measurement scales. The  $L_{dn}$  averages the varying sound levels occurring over the 24-hour day and gives a 10 decibel penalty to noises occurring between the hours of 10:00 p.m. and 7:00 a.m. to take into account the greater annoyance of intrusive noise levels during nighttime hours. Since  $L_{dn}$  is a 24-hour average noise level, an area could have sporadic loud noise levels above 60 dB(A) which average out to a lower value over the 24-hour period. CNEL is similar to  $L_{dn}$  but includes a separate 5 dB(A) penalty for noise occurring between the hours of 7:00 p.m. and 10:00 p.m. CNEL and  $L_{dn}$  values usually agree with one another within 1 dB(A). The Equivalent Noise Level ( $L_{eq}$ ) is a single noise level, which, if held constant during the measurement time period, would represent the same total energy as a fluctuating noise.  $L_{eq}$  values are commonly expressed for periods of one hour, but longer or shorter time periods may be specified. In general, a change in noise level of less than three decibels is not audible. A doubling of the distance from a noise source will generally equate to a decrease of six decibels.

Guidance for appropriate long-term background noise levels for various land uses are established in the City of Santa Barbara General Plan Noise Element Land Use Compatibility Guidelines. Building codes also establish maximum average ambient noise levels for the interiors of structures.

High construction noise levels occur with the use of heavy equipment such as scrapers, rollers, graders, trenchers, and large trucks for demolition, grading, and construction. Equipment noise levels can vary substantially through a construction period, and depend on the type of equipment, number of pieces operating, and equipment maintenance. Construction equipment generates noise levels of more than 80 or 90 dB(A) at a distance of 50 feet, and the shorter impulsive noises from other construction equipment (such as pile drivers and drills) can be even higher, up to and exceeding 100 dB(A). Noise during construction is generally intermittent and sporadic, and after completion of the initial demolition, grading, and site preparation activities, tends to be quieter.

The Noise Ordinance (Chapter 9.16 of the Santa Barbara Municipal Code) governs short-term or periodic noise, such as construction noise, operation of motorized equipment or amplified sound, or other sources of nuisance noise. The ordinance establishes limitations on hours of construction and motorized equipment operations, and provides criteria for defining nuisance noise in general.

## **Noise – Existing Conditions and Project Impacts**

### ***Existing Conditions/Affected Environment***

The primary source of ambient noise in the City of Santa Barbara is vehicle traffic noise. The City Master Environmental Assessment (MEA) *Noise Contour Map* identifies average ambient noise levels within the City of Santa Barbara.

Within the MCCP area, approximately 20 feet on either side of Foothill Road is in the 65 – 69 dB CNEL range, with no other portions of Mission Canyon exposed to 65 dB or above (Santa Barbara County 2008a).

### ***CEQA Thresholds of Significance***

A significant impact on Noise would be expected to occur if the proposed project resulted in any of the impacts noted in the above checklist. The Noise Ordinance, Chapter 9.16, of the City of Santa Barbara's Municipal Code governs short-term or periodic noise, such as construction noise, operation of motorized equipment or amplified sound, or other sources of nuisance noise. For residential areas, the normally acceptable maximum exterior ambient noise level is 60 dB CNEL and interior ambient noise level is 45 dB CNEL). The ordinance restricts construction at night (generally between the hours of 8 p.m. to 7 a.m.).

Additional thresholds are contained in the County of Santa Barbara's *Environmental Thresholds & Guidelines Manual*. The County's adopted thresholds indicate that outdoor noise exposure in excess of 65 dB CNEL and/or interior noise exposure in excess of 45 dB CNEL are considered to pose significant noise impacts on sensitive receptors.

No threshold of significance is designated under NEPA analysis (see Plans and Policies Discussion above).

### ***Project Impacts/Environmental Consequences***

#### **7.a-b) Increased Noise Level; Exposure to High Noise Levels**

**Temporary Construction Noise.** The proposed project would result in the generation of temporary construction noise. Temporary project-related noise would occur from the use of construction

equipment and construction activity during daylight hours. Some residences nearby, as well as a tennis club would be affected by construction noise that could be above 60 dB at times, resulting in a *significant but feasibly mitigated* impact under CEQA. Operation of the dewatering and diversion pumps would produce a continuous low level of noise while in operation (24-hours per day) that would not exceed regulatory thresholds, a *less than significant* impact under CEQA.

Installation of the line valve (approximately one week duration) could require work at night to minimize the SCC shutdown period under emergency conditions. Installation of the bypass line across the Tennis Club's driveway (less than one day duration) would be conducted outside business hours for that facility to avoid service interruption to the Tennis Club, resulting in work during one night. Most nighttime work would be with hand tools, would produce low levels of noise and would be of short duration. Nighttime noise could occur for a maximum of six days and would result in a *less than significant* impact under CEQA.

**Long-Term Operational Noise.** The project would not result in the exposure of people to long-term noise levels exceeding local noise standards. The project would not result in a substantial permanent increase in ambient noise levels. Once the project is completed, no new noise would be generated and *no impacts* would occur.

#### **No Action Alternative**

*No impacts* associated with Noise would occur under the No Action Alternative because no construction activities would occur.

#### **Cumulative Impacts**

Noise from the proposed project would be temporary and would not contribute to cumulative long-term impacts to noise in the area because noise from construction activities would be of short duration and no noise would be associated with the completed project.

#### **Noise - Mitigation**

- N-1 Construction Notice.** At least 20 days prior to commencement of construction, the contractor shall provide written notice to all property owners and residents within 450 feet (135 m) of the project area. The notice shall contain a description of the proposed project, a construction schedule including days and hours of construction, the name and phone number of a contact person who can provide additional information or address problems that may arise during construction.
- N-2 Construction Hours.** Noise-generating construction activities (which may include preparation for construction work) shall be permitted Monday through Saturday between the hours of 7:00 a.m. and 5:00 p.m., excluding holidays observed by the City of Santa Barbara as legal holidays. Construction activities outside the above stated working hours shall be permitted for installation of the line valve (approximately one week duration) and the bypass line across the Tennis Club's driveway (less than one day duration). Nighttime noise would be limited to a maximum of approximately six days.
- N-3 Construction Equipment Sound Control.** All construction equipment, including trucks, shall be professionally maintained and fitted with standard manufacturers' muffler and silencing devices.

**N-4 Sound Barriers.** As determined necessary by COMB (based on complaints from neighbors), the project shall employ sound control devices and techniques such as noise shields and blankets during the construction period to reduce the level of noise to surrounding residents.

### Noise – Residual Impact

Implementation of the mitigation measures described above would reduce short-term impacts associated with noise during the construction period to *less than significant*.

<b>8.8 Population and Housing</b> Could the project:	<b>NO</b>	<b>YES Level of Significance</b>
a) Induce substantial growth in an area either directly or indirectly (e.g. through projects in an undeveloped area or extension of major infrastructure)?	X	
b) Displace existing housing, especially affordable housing?	X	

### Population and Housing – Existing Conditions and Project Impacts

**Issues:** Population and housing issues are associated with whether the project would result in growth inducing effects by expanding existing infrastructure or increasing the population of an area, which in turn would increase housing demand.

#### ***Existing Conditions/Affected Environment***

The project site lies within an area that is commercial and residential in nature. Residential development is present on the west side of Mission Creek in the project vicinity, both north and south of Foothill Road. The parcel adjacent to the creek on the east side and north of Foothill Road is currently undeveloped. On the east side of the creek south of Foothill Road, the parcel adjacent to the creek is open space zoned for park and recreation. A private tennis club is on the east side of that parcel.

#### ***CEQA Thresholds of Significance***

A significant impact on Population & Housing would be expected to occur if the proposed project resulted in any of the impacts noted in the above checklist.

No threshold of significance is designated under NEPA analysis (see Plans and Policies Discussion above).

### ***Project Impacts/Environmental Consequences***

#### **8.a) Growth-Inducing Impacts**

Replacement of the SCC crossing of Mission Creek would not increase the capacity of that pipeline or increase the delivery of water to users east of this location. No new roads or other infrastructure would be built. Construction of the project would be of short duration and operation of the pipeline and fish passage structure would not result in employment growth that would increase population and housing demand. Therefore, *no* growth-inducing *impacts* would occur.

## 8.b) Housing Displacement

The project would not involve any housing displacement. *No impact* would result from the project.

### **No Action Alternative**

*No impacts* associated with Population and Housing would occur under the No Action Alternative because leaving the creek bed in its current state and continuing operation of the SCC as in the past would not affect population or housing demand in the project area.

### **Cumulative Impacts**

The proposed project would have no impacts on population or housing and, thus, would not contribute to cumulative impacts to population or housing.

## **Population and Housing – Mitigation**

No mitigation is required.

## **Population and Housing – Residual Impact**

*No residual impact* would occur.

<b>8.9 Public Services</b> Could the project have an effect upon, or result in a need for new or altered services in any of the following areas:	<b>NO</b>	<b>YES Level of Significance</b>
a) Fire protection?	X	
b) Police protection?	X	
c) Schools?	X	
d) Maintenance of public facilities, including roads?	X	
e) Other governmental services?	X	
f) Electrical power or natural gas?	X	
g) Water treatment or distribution facilities?		X - Less than significant
h) Sewer or septic tanks?	X	
i) Water distribution/demand?		X - Less than significant
j) Solid waste disposal?		X - Less than significant

## **Public Services – Discussion**

**Issues:** This section evaluates project effects on fire and police protection services, schools, road maintenance and other governmental services, utilities, including electric and natural gas, water and sewer service, and solid waste disposal.

## **Public Services – Existing Conditions and Project Impacts**

### **Existing Conditions/Affected Environment**

Fire and police protection is provided by the City and County of Santa Barbara. The closest fire station is about 1,000 feet (300 m) west on Highway 192. Public schools within 1 mile (1.6 km) include Marymount Middle School (2130 Mission Ridge Road) at 0.3 mile (0.5 km) and Santa Barbara Middle School (2300 Garden Street) at 0.7 mile (1.1 km). Highway 192 is maintained by

Caltrans. Electrical power is provided by Southern California Edison, and natural gas is provided by Southern California Gas Company. Municipal water is supplied by the City, primarily through Gibraltar Reservoir and the SCC, although some well water is included. The City provides sewer. Solid waste disposal is by MarBorg.

### **CEQA Thresholds of Significance**

A significant impact on Public Services would be expected to occur if the proposed project resulted in any of the impacts noted in the above checklist.

No threshold of significance is designated under NEPA analysis (see Plans and Policies Discussion above).

### **Project Impacts/Environmental Consequences**

#### **9.a-j) Fire/Police Protection, Schools, Maintenance of Public Facilities, Utilities/Other Services**

This project is designed to protect the SCC from scour damage and to provide fish passage in Mission Creek at the Highway 192 crossing and would not substantially affect Public Services. The existing SCC operated by COMB lies roughly 2 feet (0.6 m) or less below the channel invert approximately 25 feet (8 m) downstream of Highway 192. This water line would be replaced at a greater burial depth as part of the proposed project. During construction, The SCC would be temporarily shut down for installation of a line valve and connection of a bypass pipeline to maintain water deliveries during replacement of the pipeline segment under the streambed and installation of the fish passage channel modifications. This brief shutdown would not adversely affect water deliveries because adequate supply is available to cover the shutdown. Removal of the existing pipeline segment across the creek and the concrete apron would generate solid waste to be recycled or disposed in a landfill. The small amount of solid waste generated would not exceed the capacity of the local landfill. Thus, construction impacts would be *less than significant*. Upon replacement, the water line would be sufficiently buried and encased for protection from any potential stream degradation. By protection of the water distribution facility (SCC), the proposed project would also protect the local water supply.

Construction activities would not affect police or fire protection, schools, governmental services, maintenance of public facilities, or utilities other than water supply. Operation and maintenance of the repaired SCC and the fish passage channel would have *no impacts* on public services.

### **No Action Alternative**

Under the No Action Alternative, the SCC would continue to be at risk of damage due to scour. Damage or rupture of the pipeline that requires emergency repairs would result in a shutdown of the pipeline at that location with interruption of water delivery to communities to the east. This would represent a *significant and unavoidable impact* to water supply. The No Action Alternative would have *no impacts* to other public services.

### **Cumulative Impacts**

The proposed project would not contribute to cumulative impacts to public services such as police and fire protection, schools, maintenance of public facilities, other governmental services, and utilities because no impacts to those services would occur. The less than significant impacts of the

proposed project to water distribution facilities, water distribution, and solid waste disposal would be of short duration and would not contribute considerably to cumulative impacts.

### Public Services – Mitigation

No mitigation is required.

### Public Services – Residual Impacts

Residual impacts would be *less than significant*.

<b>8.10 Recreation</b> Could the project:	<b>NO</b>	<b>YES Level of Significance</b>
a) Increase the demand for neighborhood or regional parks or other recreational facilities?	X	
b) Affect existing parks or other public recreational facilities?		X - Less than significant

### Recreation – Discussion

**Issues:** Recreational issues are associated with increased demand for recreational facilities, or loss or impacts to existing recreational facilities.

### Recreation – Existing Conditions and Project Impacts

#### **Existing Conditions/Affected Environment**

A private tennis club is located on the east side of the project area south of Highway 192. Rocky Nook Park is located on the east and west sides of the creek, just downstream of the project site.

#### **CEQA Thresholds of Significance**

A significant impact on Recreation would be expected to occur if the proposed project resulted in any of the impacts noted in the above checklist.

No threshold of significance is designated under NEPA analysis (see Plans and Policies Discussion above).

### **Project Impacts/Environmental Consequences**

#### **10.a) Recreational Demand**

This project would have *no impact* on demand for recreational facilities.

#### **10.b) Existing Recreational Facilities**

The temporary bypass pipeline placement across the Tennis Club entrance would restrict access for less than one day during construction. Installation of this pipeline across the driveway after business hours would minimize impacts to the Tennis Club. Use of the staging area at the south end of the tennis club driveway during construction could cause temporary (a few minutes) delays in ingress or exit of tennis club members. Rocky Nook Park would not be affected by the project. Impact on existing recreational facilities would be *less than significant*.

### **No Action Alternative**

No impacts associated with Recreation would occur under the No Action Alternative because no construction activities would occur that could affect the Tennis Club.

### **Cumulative Impacts**

The minor and short duration effects of construction on the Tennis Club would not contribute considerably to cumulative impacts to recreation in the area.

### **Recreation – Mitigation**

The following measure is recommended to ensure minimization of impacts to the Tennis Club.

**R-1: Coordination.** The contractor will coordinate with the Tennis Club to schedule the bypass pipeline placement across their entrance for after business hours.

### **Recreation – Residual Impacts**

Implementation of the Mitigation Measures described above would further minimize Recreation the *less than significant* impacts of the proposed project.

<b>8.11 Transportation/Circulation</b> Could the project result in:	<b>NO</b>	<b>YES Level of Significance</b>
a) Increased vehicle trips?		X - Less than significant
b) Hazards to safety from design features (e.g., sharp curves, inadequate sight distance or dangerous intersections)?		X - Potential to be significant, but mitigable
c) Inadequate emergency access or access to nearby uses?	X	
d) Insufficient parking capacity on-site or off-site?	X	
e) Hazards or barriers for pedestrians or bicyclists?		X - Potential to be significant, but mitigable

### **Transportation/Circulation – Discussion**

**Issues:** Transportation issues include traffic, access, circulation, safety, and parking. Vehicle, bicycle and pedestrian, and transit modes of transportation are all considered, as well as emergency vehicle access. Highway 192 in the vicinity of Mission Creek consists of two lanes with sharp turns and narrow shoulders.

### **Transportation/Circulation – Existing Conditions and Project Impacts**

#### **Existing Conditions/Affected Environment**

The Circulation Element of the MCCP updates the Circulation Element Map, roadway classifications, and project consistency standards of the County's Circulation Element. In so doing, the MCCP identifies a new system of roadway classifications and project consistency standards applicable within Mission Canyon, which supersede the prior County Circulation Element classifications and standards (Santa Barbara County 2008a).

As defined by the MCCP, the Acceptable Capacity (maximum number of Average Daily Trips that are acceptable for the normal operation) for a given roadway is based upon its roadway classification and the acceptable level of service (LOS) for that roadway. The minimum LOS for roadways in the



MCCP area is LOS B (stable flow, little delay, few signal phases unable to handle approaching vehicles). Foothill Road within the MCCP area is classified as a 2-lane arterial roadway, LOS A (free unobstructed flow, no delays; signal phases able to handle approaching vehicles). Highway 192 is a Caltrans jurisdiction highway, and the designated acceptable LOS is D (approaching unstable flow, moderate to heavy delays, significant signal time deficiencies experienced for short durations during peak traffic period). While Mission Canyon's roadways and intersections currently operate within acceptable LOS, the Mission Canyon Road (south)/Foothill Road intersection experiences the greatest congestion and average vehicle delay during the p.m. peak hour of any intersection within the Plan area (Table 2). The combination of extensive vehicle queues during the evening rush-hour, limited roadway shoulder width and turn out areas, and close to moderately spaced driveways on Foothill Road have the potential to adversely affect emergency egress out of the canyon and emergency vehicle response in the event of a wildfire (Santa Barbara County 2008a). Caltrans is scheduled to begin a Mission Canyon Safety Project along Foothill Road (beginning in April 2009 and ending in Fall 2009) which will underground lateral drainage ditches along the road right-of-way and provide additional flat shoulder areas for vehicles to merge out of the travel lane and avoid conflicts with responding emergency vehicles (Caltrans 2009).

The acceptable capacity volume for Foothill Road in the MCCP area is 11,680 (Santa Barbara County 2008a); the existing roadway volume in the project area is 3,500 (Caltrans 2007).

**Table 2. Existing Intersection Level of Service**

Intersection	Control	Avg. Delay (sec.)/LOS*	
		AM Peak	PM Peak
Mission Canyon (south)/Foothill Road	3-Way Stop	21.3/LOS C	25.6/LOS D
Mission Canyon (north)/Foothill Road	3-Way Stop	9.4/LOS A	10.6/LOS B
<i>Notes:</i> * LOS A: Free unobstructed flow, no delays; signal phases able to handle approaching vehicles. LOS B: Stable flow, little delay, few phases unable to handle approaching vehicles. LOS C: Stable flow, low to moderate delays, full use of peak direction signal phases. LOS D: Approaching unstable flow, moderate to heavy delays, significant signal time deficiencies experienced for short durations during peak traffic period.  Mission Canyon Road south/north are separated by a short segment of Highway 192, creating separate intersections.  <i>Source:</i> Santa Barbara County 2008a.			

### **CEQA Thresholds of Significance**

A significant impact on Transportation Resources would be expected to occur if the proposed project resulted in any of the impacts noted in the checklist above.

The impacts of project-generated traffic are also assessed against the following standards from the County of Santa Barbara's *Environmental Thresholds & Guidelines Manual* and the Santa Barbara County Association of Government *Congestion Management Program Guidelines*. A significant traffic impact occurs when:

- i. any roadway or intersection currently operating at LOS A or B decreases operational levels by two levels of service as a result of project added traffic;

- ii. any roadway or intersection operating at LOS C for which project added traffic results in LOS D or worse;
- iii. the addition of project traffic to an intersection increases the volume to capacity (V/C) ratio by the value provided below or sends at least 5, 10, or 15 trips to intersections operating at LOS F, E or D, respectively.

<b>Level of Service (Including The Project)</b>	<b>Increase in V/C (Greater Than)</b>
A	0.20
B	0.15
C	0.10
<b>Or the addition of</b>	
D	15 trips
E	10 trips
F	5 trips

- iv. Project access to a major road or arterial road would require a driveway that would create an unsafe situation or a new traffic signal or major revisions to an existing traffic signal.
- v. Project adds traffic to a roadway that has design features (e.g., narrow width, road side ditches, sharp curves, poor sight distance, inadequate pavement structure) or receives use which would be incompatible with substantial increases in traffic (e.g., rural roads with use by farm equipment, livestock, horseback riding, or residential roads with heavy pedestrian or recreational use, etc.) that will become potential safety problems with the addition of project or cumulative traffic. Exceedance of the roadways designated Circulation Element Capacity may indicate the potential for the occurrence of the above impacts.
- vi. Project traffic would also be considered a significant impact if it would utilize a substantial portion of an intersection(s) capacity where the intersection is currently operating at acceptable levels of service (A-C) but with cumulative traffic would degrade to or approach LOS D (v/c 0.81) or lower. Substantial is defined as a minimum change of 0.03 for intersections which would operate from 0.80 to 0.85 and a change of 0.02 for intersections which would operate from 0.86 to 0.90, and 0.01 for intersections operating at anything lower.

No threshold of significance is designated under NEPA analysis (see Plans and Policies Discussion above).

### ***Project Impacts/Environmental Consequences***

#### **11.a) Traffic**

The overall project construction is estimated to last approximately 1 to 2 months. Working hours during construction are expected to be 7 a.m.–3 p.m. weekdays (Monday through Saturday) excluding holidays for most of the project. However, some work activities could occur at night, such as when the line valve is installed. That night work would only occur in emergencies. The bypass pipeline would be trenched under the tennis club driveway outside business hours for that facility (i.e., during one night). Staging, equipment parking, materials storage, and temporary construction worker parking would occur at the staging area located at the south end of the tennis club driveway.

The project would generate construction-related traffic that would occur over the 1- to 2-month construction period and would vary depending on the stage of construction. This would include daily construction worker trips; delivery of materials (e.g., pipe, rock, pipe bedding material, and concrete) at intervals during the project; and one-time delivery and removal of large equipment, such as an excavator. Construction worker trips would generally be prior to the a.m. and p.m. peak. The small number of truck trips (up to 10) for material delivery that could occur during the a.m. peak would not increase V/C to a level that would cause a change in LOS. Temporary construction traffic is generally considered an adverse but not significant impact. In this case, given traffic levels in the area and the short duration of construction activities, construction-related traffic would result in a *less than significant* impact.

#### **11.b,e) Safety**

During construction there is a potential for construction equipment and delivery trucks to encroach into Highway 192 for short periods of time and create roadway hazards for vehicle traffic, bicycles, and pedestrians. Impacts of such hazards would be *significant but feasibly mitigated*.

#### **11.c,d) Emergency Access/Parking**

Emergency vehicle access along Highway 192 would not be impaired by project construction activities. Staging, equipment, materials storage, and temporary construction worker parking would occur in the designated staging area for the project and would not affect parking for the Tennis Club. The proposed project would temporally increase parking demand but would not affect parking supply because project parking would be provided. *No impacts* would occur.

#### **No Action Alternative**

The No Action Alternative would not remove the existing concrete apron downstream of the Mission Creek Bridge at Highway 192, or relocate the SCC. The No Action Alternative would leave the proposed project area and vicinity in its current condition. Under the No Action Alternative, there would be *no impacts* to Transportation/Traffic because no project construction would occur. If emergency repairs to the pipeline are required due to scour damage in the future, impacts to traffic safety would be *significant but feasibly mitigated* as described for the project.

#### **Cumulative Impacts**

The proposed project would be conducted during the fall low-precipitation period (September 1st – November 1st). Caltrans has 2 projects scheduled along Highway 192 around the same time period as the proposed project that have the potential to impact traffic along this roadway (Attachment C). The Tea Fire Emergency Project is currently under construction in the Montecito area between Post Mile (PM) 4.8 to 6.2, approximately 1.5 miles (2.4 km) east of the proposed project, and is scheduled for completion in May 2009. The Mission Canyon Safety project (PM 2.4 to 3.1) is scheduled for construction from April to October 2009 and is located just west of the proposed project site. The project schedules for the Mission Canyon Safety Project and the proposed project (line valve installation only) may overlap in September and October 2009. The proposed project would have a minor and short duration contribution to cumulative impacts to Transportation in the area that would be mitigated to *less than significant*.

### Transportation/Circulation - Mitigation

**T-1: Traffic Safety.** The construction contractor shall prepare a traffic safety plan to be approved by COMB prior to construction. At a minimum, the plan shall address traffic control during ingress from and egress to Highway 192 of project equipment and vehicles (including materials deliveries). The plan will include necessary signage and traffic control measures. All traffic control shall be coordinated with Caltrans.

### Transportation/Circulation – Residual Impact

Implementation of the mitigation measure described above would reduce Transportation impacts to *less than significant*.

<b>8.12 Water Environment</b> Could the project result in:	<b>NO</b>	<b>YES Level of Significance</b>
a) Changes in absorption rates, drainage patterns, or the rate and amount of surface runoff?		X - Less than significant
b) Exposure of people or property to water related hazards such as flooding?	X	
c) Discharge into surface waters?		X - Significant but mitigable
d) Change in the quantity, quality, direction or rate of flow of ground waters?		X - Significant but mitigable
e) Increased storm water drainage?		X - Less than significant

### Water Environment – Discussion

**Issues:** Water resource issues include changes in drainage patterns and infiltration/groundwater recharge; storm water runoff quantity and flooding; and water quality. The project will have direct hydraulic and hydrologic impacts on Mission Creek. Extensive hydraulic modeling was conducted to evaluate the hydraulic and hydrologic effects of the project and to determine the most appropriate channel modification design and structure foundation protection. The results of the modeling were summarized in the *Highway 192 at Mission Creek Fish Passage Improvement Project* report (Questa Engineering 2007).

### Water Environment – Existing Conditions and Project Impacts

#### **Existing Conditions/Affected Environment**

Mission Creek traverses the City of Santa Barbara, for 4.4 miles (7 km), from Mission Canyon to the Pacific Ocean, immediately east of Stearns Wharf. The project site is located in the lower portion of Mission Canyon. Portions of the creek, downstream of the project area, have been straightened and concrete lined. The project site is located within Mission Creek and would, therefore, be susceptible to flooding. A debris basin is present on the upper reaches of Mission Creek, but the basin is small and would have no effect on regulating the size of a large flood. Mission Creek is a good example of a stream that has been surrounded and modified by intense urban development pressure (City of Santa Barbara 1979). Flow during the dry season is augmented by releases of water from Gibraltar Reservoir to maintain habitat for steelhead.

Runoff to Mission Creek comes from undeveloped areas and residential development in the watershed. Storm water quality is generally affected by the length of time since the last rainfall,

rainfall intensity, urban uses of the area, and the quantity of transported sediment. Typical urban water quality pollutants usually result from motor vehicle operations, oil and grease residues, fertilizer/pesticide uses, human/animal littering, and poor property management. The majority of pollutant loads are usually washed away during the first storm that occurs after the dry-season period.

### **CEQA Thresholds of Significance**

A significant impact on the Water Environment would be expected to occur if the proposed project resulted in any of the impacts noted in the above checklist.

No threshold of significance is designated under NEPA analysis (see Plans and Policies Discussion above).

### **Project Impacts/Environmental Consequences**

#### **12.a,e) Drainage**

Extensive modeling was performed to analyze pre- and post-project hydraulic and hydrologic conditions at the project site. The project would not have foreseeable effects on percolation rates, groundwater recharge, or the amount of surface water runoff. The project would include dewatering of the work area by diversion of surface water from immediately upstream of the construction area and pumping of near-surface shallow groundwater from the pipeline trench. The water would be diverted to immediately downstream of the construction area, resulting in no net loss in stream flow. As a result, surface water flow and shallow groundwater flow would be temporarily disrupted during construction. However, because stream diversion would be temporary and absorption rates and amount of surface runoff would not change as a result of the project, impacts under CEQA would be *less than significant*.

#### **12.b) Flooding**

Although the project is located within the floodplain of Mission Creek, the project would not increase the flooding potential or expose people or property to flooding. Therefore, *no impacts* would occur.

#### **12.c,d) Water Quality**

Construction activities, including removal of the existing concrete apron, pipeline replacement, construction of the step pools, and slope contouring, would result in vegetation removal, disturbance of soils, and temporary exposure of soils to erosion from wind and water. Installation/removal of the diversion and pipeline trench dewatering have the potential to cause turbidity in the creek. In addition, the first flush of water over the reconstructed channel bed would also result in temporary turbidity. Erosion induced siltation of Mission Creek could result in adverse water quality impacts, as turbid water can effect aquatic organisms in the creek. Upon completion of grading and construction activities, the construction area would undergo a revegetation program, which would help stabilize disturbed soils. Diversion installation and removal would cause a temporary disturbance of the creek bed with rapid dispersal of turbidity. Water from pipeline trench dewatering would be treated (by settling in a Baker tank or similar means) before discharge to the creek but could have effects on downstream water quality. Temporary soil erosion and water diversion/discharge impacts under CEQA are considered *significant but feasibly mitigated*.

### **No Action Alternative**

Under the No Action Alternative, no changes would occur to the existing concrete apron in Mission Creek, and the underlying water pipeline would not be replaced. Erosion would not be triggered or accelerated and temporary changes to surface water and shallow groundwater would not occur. Therefore, no hydrologic impacts would occur. Continued scour and degradation of the concrete apron could result in future damage to the SCC with the potential for release of treated water to the creek. If this were to occur, water quality downstream of the SCC crossing would be altered through turbidity and disinfectants in the released water for the duration of the water release. Such impacts under CEQA would be of short duration and *less than significant*.

### **Cumulative Impacts**

Projects that result in significant, project-specific, hydrologic impacts are generally considered to also make a significant contribution to corresponding cumulative impacts. As such, the proposed project would result in a significant but feasibly mitigated contribution to cumulative impacts related to erosion-induced siltation of local creeks and the Pacific Ocean.

### **Water Environment - Mitigation**

**WQ-1 Erosion and Sediment Control.** The SWPPP, to be prepared under the provisions of a Construction General Storm Water Permit, shall specifically include measures to prevent erosion and sediment runoff from the construction site that could cause sedimentation in Mission Creek. These measures shall include, at a minimum, physical devices to prevent sediment discharges (e.g., silt fencing, straw bales), as well as routine monitoring of these devices and revegetation of disturbed soils that would remain exposed after construction. Best Management Practices (BMPs) shall be developed and implemented based on the following guidance manuals: Stormwater Best Management Practice Handbook: Construction (California Stormwater Quality Association 2003) and Caltrans Storm Water Quality Handbooks – Construction Site Best Management Practices (BMPs) (Caltrans 2003). Types of BMPs that would be implemented as appropriate to site conditions include:

#### **Stockpile Management BMPs**

- Include silt fencing, straw wattles, or straw bales around the base of all stockpiles to intercept sediment and inhibit the flow of sediment-laden runoff from the stockpiles.
- Use soil binders or other cover on stockpiles to reduce runoff of sediments.

#### **Grading and Filling BMPs**

- Place silt fences, straw wattles, or straw bales around areas to be graded, especially cut and fill slopes, to intercept any loose material that could erode and enter the creek during construction.
- Use soil binders, temporary mulches, or erosion control blankets or hydroseeding for temporarily bare slopes that would be exposed to wind and water erosion, prior to beginning work and immediately after work.
- Revegetate disturbed soils that would remain after construction.

- Stabilize construction entrances to the project site with gravel, to help prevent sediment tracking from the construction area to paved roads.

#### **Diversion/Dewatering BMPs**

- Prior to construction-related discharges, energy dissipation measures shall be installed at the surface water diversion and trench dewatering discharge points into Mission Creek to prevent erosion.
- Sedimentation basins (maybe straw bales lined with filter fabric or a Baker tank) shall be used for diversion and dewatering discharge points to prevent excess downstream sedimentation. These basins shall be constructed prior to dewatering and regularly maintained during construction to remain in good working order.
- Install sediment controls (either a sediment trap or sediment basin) to collect water from dewatering operations. Filter or settle out sediment from the sediment trap or sediment basin using a sump pit and perforated or silt standpipe with holes and wrapped in filter material.

Also see mitigation measure HAZ-1 in relation to water quality impacts related to accidental spills of fuel or other petroleum products.

#### **Water Environment – Residual Impact**

Implementation of the measures described above would reduce temporary water quality impacts during construction to *less than significant*.

<b>8.13 Mandatory Findings Of Significance.</b>	<b>YES</b>	<b>NO</b>
a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?		X
b) Does the project have the potential to achieve short-term, to the disadvantage of long-term, environmental goals?		X
c) Does the project have potential impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?		X
d) Does the project have potential environmental effects that will cause substantial adverse effects on human beings, either directly or indirectly?		X

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## **9.0 Consultation and Coordination**

### **9.1 Fish and Wildlife Coordination Act (16 USC § 651 et seq.)**

The Fish and Wildlife Coordination Act requires that Reclamation consult with fish and wildlife agencies (federal and state) on all projects that could affect biological resources. Coordination with CDFG and RWQCB will occur through the CEQA review process and through permitting for the project. Coordination with the NMFS will be through ESA consultation.

### **9.2 Endangered Species Act (16 USC § 1521 et seq.)**

Section 7 of the Endangered Species Act requires Federal agencies, in consultation with the Secretary of the Interior, to ensure that their actions do not jeopardize the continued existence of endangered or threatened species, or result in the destruction or adverse modification of the critical habitat of these species. The proposed project would affect steelhead in Mission Creek during construction activities with benefits to the species upon completion of the fish passage component of the project. Formal consultation with NMFS for steelhead is being conducted for this project.

### **9.3 National Historic Preservation Act (15 USC § 470 et seq.)**

Section 106 of the NHPA requires federal agencies to evaluate the effects of federal undertakings on historical, archaeological, and cultural resources. Reclamation has determined that the action will result in no potential to affect known historic properties pursuant to the regulations at 36 CFR Part 800.3(a)(1). Because excavation for the proposed project will be in previously disturbed areas, the potential for effects on any historical, archaeological, or cultural resources is very low. Monitoring will be conducted during excavation to verify that no such resources are affected, and no further compliance actions are required.

### **9.4 Migratory Bird Treaty Act (16 USC Sec. 703 et seq.)**

The MBTA implements various treaties and conventions between the U.S. and Canada, Japan, Mexico, and the former Soviet Union for the protection of migratory birds. Unless permitted by regulations, the Act provides that it is unlawful to pursue, hunt, take, capture or kill; attempt to take, capture or kill; possess, offer to or sell, barter, purchase, deliver or cause to be shipped, exported, imported, transported, carried, or received any migratory bird, part, nest, egg, or product, manufactured or not. Subject to limitations in the Act, the Secretary of the Interior (Secretary) may adopt regulations determining the extent to which, if at all, hunting, taking, capturing, killing, possessing, selling, purchasing, shipping, transporting, or exporting of any migratory bird, part, nest, or egg will be allowed, having regard for temperature zones, distribution, abundance, economic value, breeding habits, and migratory flight patterns.

The Proposed Action would have no effect on birds protected by the MBTA due to timing of construction activities.

## **9.5 Executive Order 11988 – Floodplain Management and Executive Order 11990-Protection of Wetlands**

Executive Order 11988 requires Federal agencies to prepare floodplain assessments for actions located within or affecting flood plains, and similarly, Executive Order 11990 places similar requirements for actions in wetlands. The project would not affect floodplains and would have minor, temporary effects on a small amount of wetland.

## **9.6 Statement on Environmental Justice**

*EO 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations*, requires that federal agencies (or projects with a federal nexus) make achieving environmental justice part of their mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of their programs, policies, and activities on minority populations and low-income populations.

The purpose of this project is to replace a section of the SCC, which is the primarily water supply link to southern Santa Barbara County; remove an existing fish passage barrier; and improve the stream channel to reduce lateral scour of the banks. The proposed project would provide benefits to the local community by reducing erosion and natural creek scour at the bridge apron and reducing a threat to the integrity of the SCC and local water supply. The project would also have environmental benefits by improving migration passage for steelhead. The short-term impacts of proposed project construction would not have a disproportionate effect on environmental justice populations (a disproportionate effect is defined as an effect that is predominantly borne, more severe, or of a greater magnitude in areas with environmental justice populations than in other areas) because no minority or low-income populations are present adjacent to the project site.

## **9.7 Indian Trust Assets**

Indian Trust Assets (ITAs) are legal interests in property held in trust by the U.S. for federally-recognized Indian tribes or individual Indians. An Indian trust has three components: (1) the trustee, (2) the beneficiary, and (3) the trust asset. ITAs can include land, minerals, federally-reserved hunting and fishing rights, federally-reserved water rights, and in-stream flows associated with trust land. Beneficiaries of the Indian trust relationship are federally-recognized Indian tribes with trust land; the U.S. is the trustee. By definition, ITAs cannot be sold, leased, or otherwise encumbered without approval of the U.S. The characterization and application of the U.S. trust relationship have been defined by case law that interprets Congressional acts, executive orders, and historic treaty provisions.

Consistent with President William J. Clinton's 1994 memorandum, "Government-to-Government Relations with Native American Tribal Governments," Reclamation assesses the effect of its programs on tribal trust resources and federally-recognized tribal governments. Reclamation is tasked to actively engage federally-recognized tribal governments and consult with such tribes on a government-to-government level (USEPA, 59 Federal Register 1994) when its actions affect ITAs. The U.S. Department of the Interior (DOI) Departmental Manual Part 512, Chapter 2, ascribes the responsibility for ensuring protection of ITAs to the heads of bureaus and offices (DOI 1995). Part

512, Chapter 2 of the Departmental Manual also states that it is the policy of the DOI to recognize and fulfill its legal obligations to identify, protect, and conserve the trust resources of federally recognized Indian tribes and tribal members. All bureaus are responsible for, among other things, identifying any impact of their plans, projects, programs, or activities on ITAs; ensuring that potential impacts are explicitly addressed in planning, decision, and operational documents; and consulting with recognized tribes who may be affected by proposed activities. Consistent with this, Reclamation's Indian trust policy states that Reclamation will carry out its activities in a manner which protects ITAs and avoids adverse impacts when possible, or provides appropriate mitigation or compensation when it is not. To carry out this policy, Reclamation incorporated procedures into its NEPA compliance procedures to require evaluation of the potential effects of its proposed actions on trust assets (Reclamation 1993). Reclamation is responsible for assessing whether the Mission Creek Project would have the potential to affect ITAs. Reclamation will comply with procedures contained in Departmental Manual Part 512, Chapter 2 guidelines, which protect ITAs.

The indigenous California people in the study area were the Barbareño Chumash. The Barbareño Chumash developed a highly sophisticated hunting and gathering subsistence, extensive trading and exchange system based on shellfish beads, and a chiefdom level of social organization. The only federally-recognized Chumash Indian Tribe located in Santa Barbara County, is the Santa Ynez Band of Mission Indians. The closest ITA is a Public Domain Allotment, located approximately 20 miles (32 km) west-northwest of the project site. The project would have no affect on ITAs.

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## **10 List of Preparers and Reviewers**

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## 11 Initial Study Conclusion

On the basis of this initial evaluation it has been determined that

- ☐ The proposed project (may/will) have a significant effect on the environment, and further study in an Environmental Impact Report is required.
- ☒ With identified mitigation measures agreed-to by the applicant, potentially significant impacts would be avoided or reduced to less than significant levels. A Mitigated Negative Declaration will be prepared.
- ☐ Project impacts on the environment would be less than significant. A Negative Declaration will be prepared.

Rosemary Thompson

17 April 2009

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Environmental Analyst

Date

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## 12 List of References

- Boyle Engineering Corporation. 2008. (FINAL DRAFT) Phase 2 Reliability Study for South Coast Conduit Upper Reach Tecolote Tunnel to Corona Del Mar WTP and Carpinteria Reach South Coast Conduit Booster Pump Station to Ortega Reservoir (ref: VT-C32-102-05, Section 6). April.
- Boyle Engineering Corp. 2005. (FINAL DRAFT) Reliability and Alternatives Study for the South Coast Conduit Carpinteria Reach Cater Booster Pump Station to the Ortega Reservoir (ref: VT-C32-102-03). April.
- California Department of Fish and Game (CDFG). 2008. California Natural Diversity Database (CNDDDB) [Commercial Version]. Wildlife and Habitat Data Analysis Branch. CNDDDB Search performed 2008.
- California Air Resources Board (ARB). 2009. Area Designations Maps/ State and National Standards. Web site <http://www.arb.ca.gov/desig/adm/adm.htm>.
- California Department of Transportation (Caltrans). 2009. Construction Projects Report. Updated Information Presented to Santa Barbara County Association of Governments (SBCAG). Information provided on February 5, 2009, for the meeting of February 19, 2009.
- \_\_\_\_\_. 2007. 2007 Traffic Volumes on California State Highways. <http://www.dot.ca.gov/hq/traffops/saferesr/trafdata/2007all.htm>
- \_\_\_\_\_. 2003. Caltrans Storm Water Quality Handbooks. Construction Sites Best Management Practices Manual. [http://www.dot.ca.gov/hq/construc/stormwater/CSBMPM\\_303\\_Final.pdf](http://www.dot.ca.gov/hq/construc/stormwater/CSBMPM_303_Final.pdf). March.
- California Stormwater Quality Association. 2003. Stormwater Best Management Practice Handbook – Construction. <http://www.cabmphandbooks.com/Documents/Construction/Construction.pdf>.
- COMB. 2009. Final EIS/EIR - South Coast Conduit/Upper Reach Reliability Project. Section 3.2, Table 3.2-2.
- City of Santa Barbara. 1979. Seismic Safety – Safety Element.
- Department of the Interior (DOI). 1995. Departmental Manual, Chapter 2, Part 512. *Departmental Responsibilities for Indian Trust Resources, American Indian and Alaska Native Programs*. Office of American Indian Trust.
- Department of the Interior, Bureau of Reclamation (Reclamation). 1993. *Bureau of Reclamation Indian Trust Asset Policy and Guidance*.
- Dibblee, T.W., Jr. 1986. Geologic Map of the Santa Barbara Quadrangle, Santa Barbara County, California. Scale 1:24,000.
- Environmental Laboratory. 1987. US Army Corps of Engineers Wetlands Delineation Manual. January.

- Johnson, J. R. 1988. *Chumash Social Organization: An Ethnohistoric Perspective*. Ph.D. dissertation, University of California, Santa Barbara.
- Lehman, P. E. 1994. *The Birds of Santa Barbara County*. Allen Press. Lawrence, Kansas.
- National Marine Fisheries Service (NMFS). No Date. NMFS California Anadromous Fish Distributions, Southern California Steelhead ESU, Current Stream Habitat Distribution Table. <http://swr.ucsd.edu/hcd/soCalDistrib.htm>.
- \_\_\_\_\_. 2005. Endangered and Threatened Species; Designation of Critical Habitat for Seven Evolutionarily Significant Units of Pacific Salmon and Steelhead in California; Final Rule. Federal Register 70(170):52488-52586.
- Questa Engineering Corporation. 2008. Highway 192 at Mission Creek South Coast Conduit Rehabilitation and Fish Passage Improvement Project. Detailed Project Evaluation Update: Fish Passage, Scour Analysis, and Flood Control. Prepared for City of Santa Barbara. November.
- \_\_\_\_\_. 2007. Highway 192 at Mission Creek Fish Passage Improvement Project. Prepared for Santa Barbara County Works Department (ref: 240100). June.
- Stoecker, M. W. 2002. Steelhead Assessment and Recovery Opportunities in Southern Santa Barbara County, California. Conception Coast Project.
- Santa Barbara County. 2008a. Initiation Draft Mission Canyon Community Plan. Prepared by Santa Barbara County Planning and Development Office of Long Range Planning. May.
- \_\_\_\_\_. 2008b. Environmental Thresholds and Guidelines Manual. Revised September 2008, published October 2008.
- \_\_\_\_\_. 1991. Santa Barbara County Comprehensive Plan, Seismic Safety and Safety Element.
- Santa Barbara County Air Pollution Control District (SBC APCD). 2007. *Scope and Content of Air Quality Sections in Environmental Documents*. Prepared by the Technology and Environmental Assessment Division. Updated July 2007.
- SBC APCD and Santa Barbara County Association of Governments. 2007. *2007 Clean Air Plan - Santa Barbara County's Plan to Maintain the Federal 8-Hour Ozone Standard and Attain the State 1-Hour Ozone Standard*.
- Stone, D. 2007. *Phase I Archaeological Resources Report. Mission Creek/State Highway 192. Santa Barbara, California. APN 023-240-010*.
- U.S. Army Corps of Engineers (USACE). 2008. Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (Version 2.0). Ed. J. S. Wakelely, R. W. Lichvar, and C. V. Noble. ERDC/EL TR-08-28. Vicksburg, MS: U.S. Army Corps of Engineers Research and Development Center.

U.S. Environmental Protection Agency (USEPA). 1995. *Compilation of Air Pollutant Emission Factors, AP-42, Volume I*. Section 13.2.3, Heavy Construction Operations. Web site <http://www.epa.gov/ttn/chief/ap42/ch13/final/c13s02-3.pdf>.

\_\_\_\_\_. 1994. Government-to-Government Relations With Native American Tribal Governments. The President Memorandum of April 29, 1994. *Federal Register* Vol. 59, No. 85. Wednesday, May 4, 1994

U.S. Fish and Wildlife Service (USFWS). 2008. Endangered and Threatened Wildlife and Plants; Revised Critical Habitat for the California Red-legged Frog (*Rana aurora draytonii*); Proposed Rule. *Federal Register* 73(180): 53491-53680.

\_\_\_\_\_. 2006. Endangered and Threatened Wildlife and Plants; Designation of Critical Habitat for the California Red-Legged Frog, and Special Rule Exemption Associated With Final Listing for Existing Routine Ranching Activities; Final Rule. *Federal Register* 71(71): 19243-19346.

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# **Attachment A**

## **Figures and Plans**

### **List of Figures and Plans**

- A-1 Mission Creek Project Location Map
- A-2 Mission Creek Stream Diversion Plan
- A-3 Fish Passage Plan and Profile
- A-4 New Pipeline and Bypass Pipeline Plan
- A-5 Existing Pipeline Diagram
- A-6 Projects Currently Under Construction or Proposed in the Vicinity of the Proposed Project Area
- A-7 Land Use in the Project Vicinity

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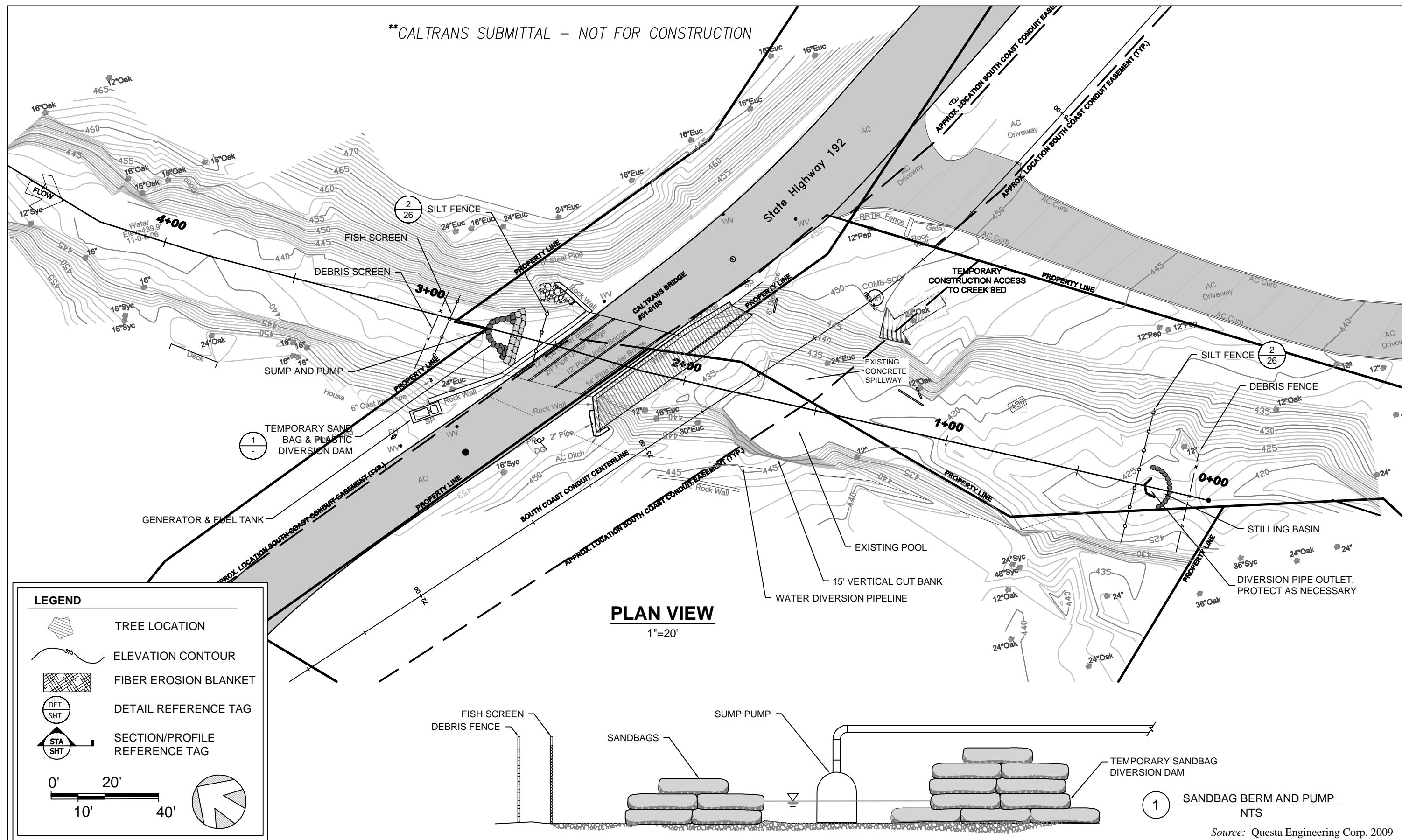
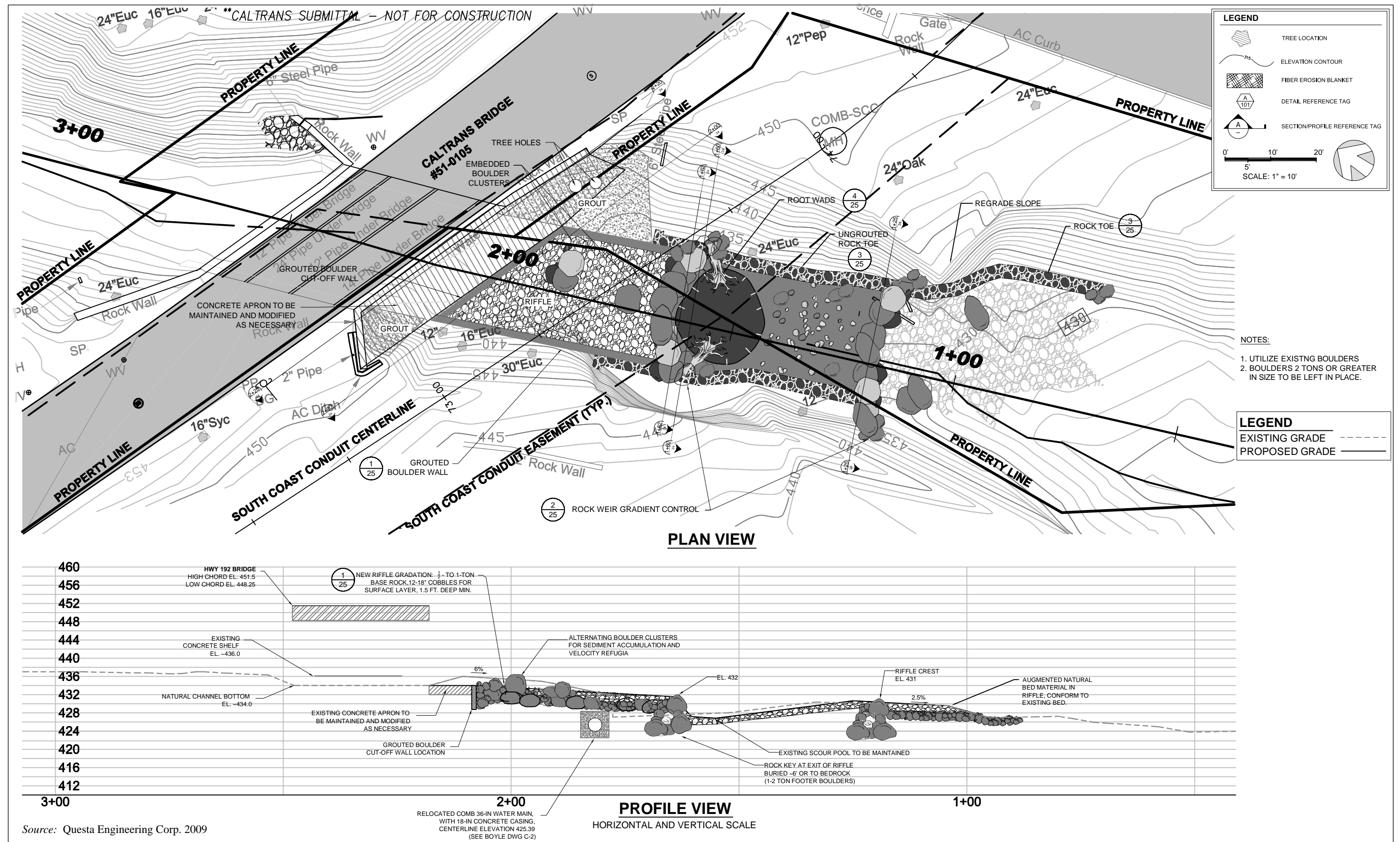


Figure A-2. Mission Creek Stream Diversion Plan





### Figure A-3. Fish Passage Plan and Profile



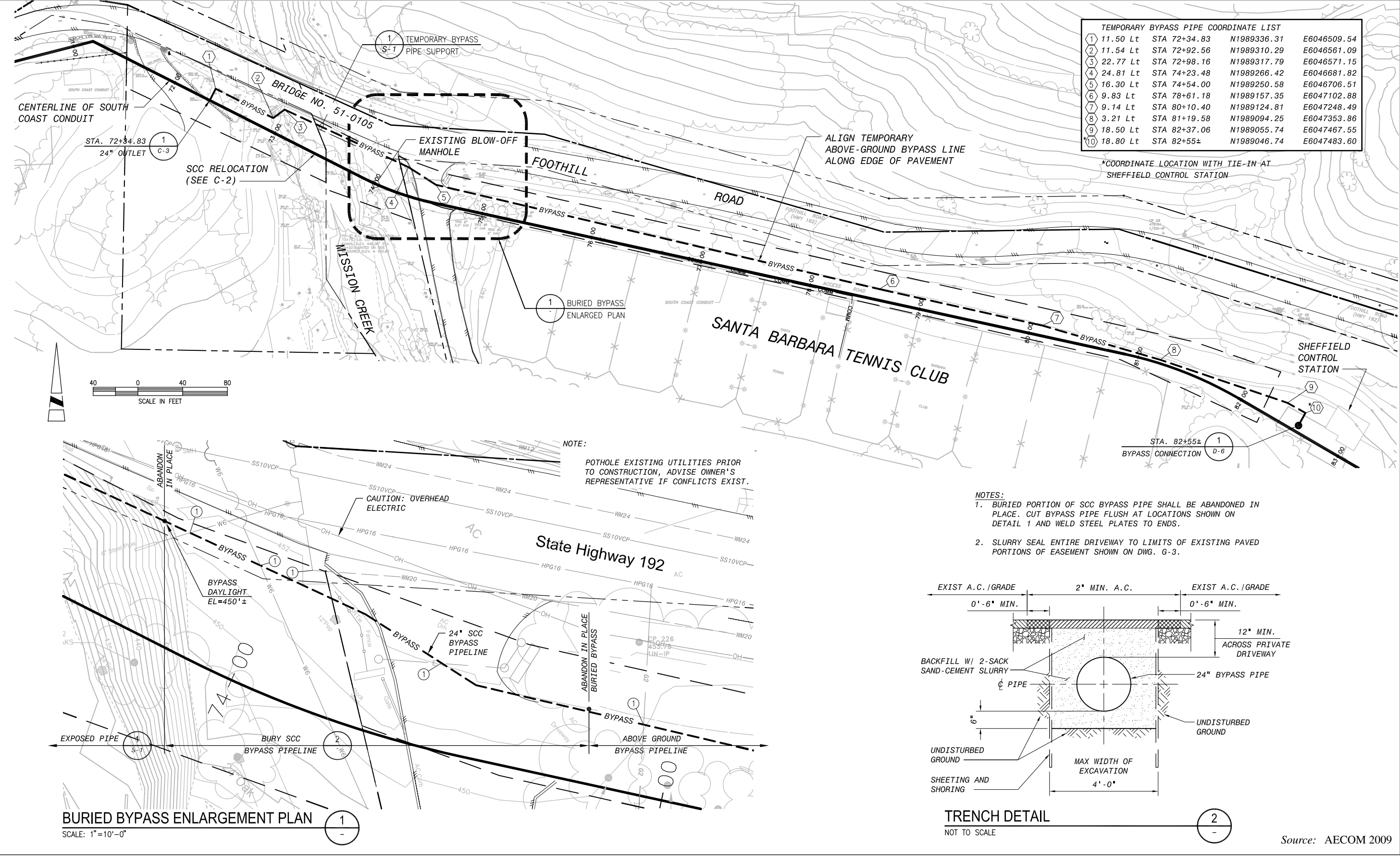


Figure A-4. New Pipeline and Bypass Pipeline Plan

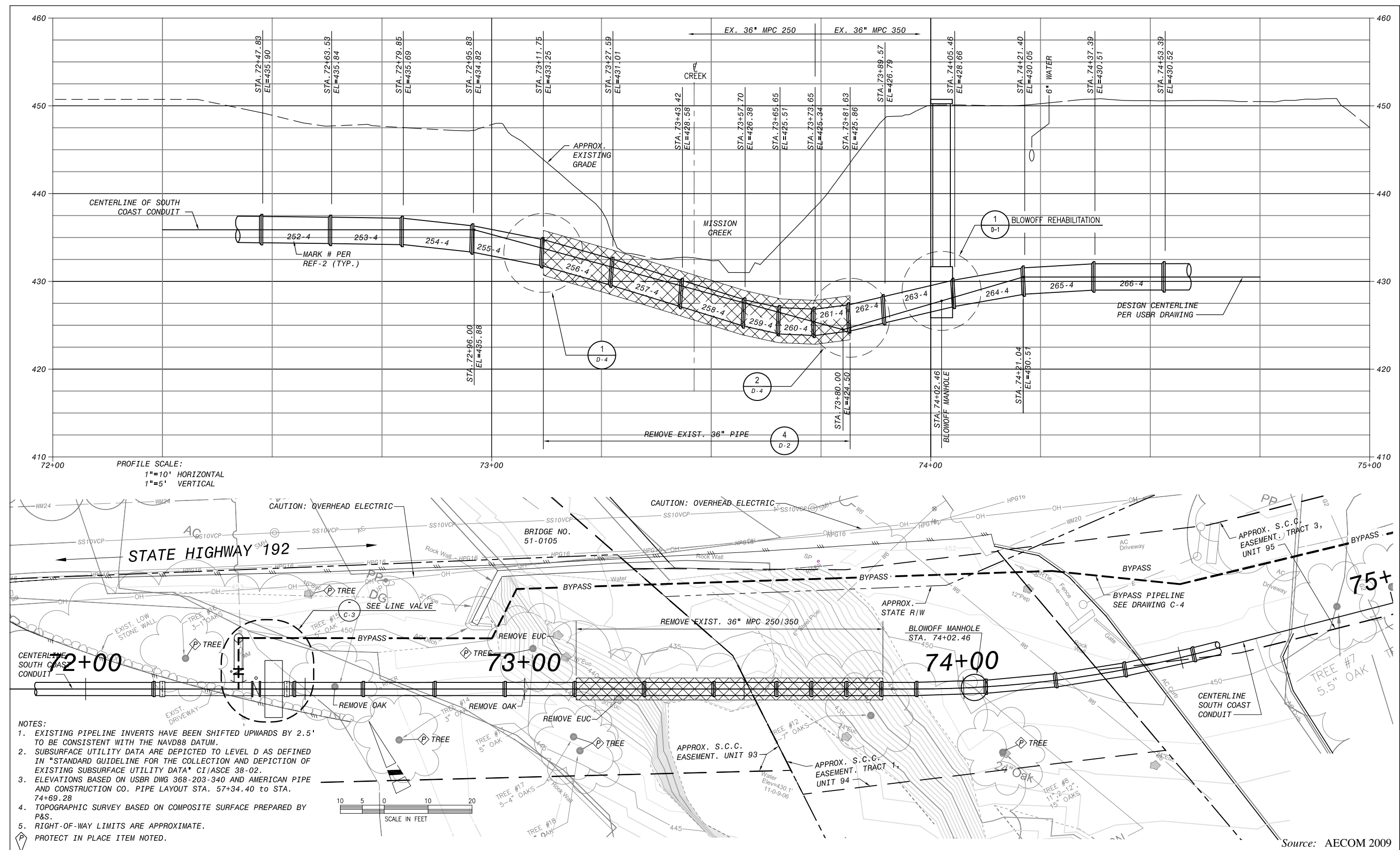
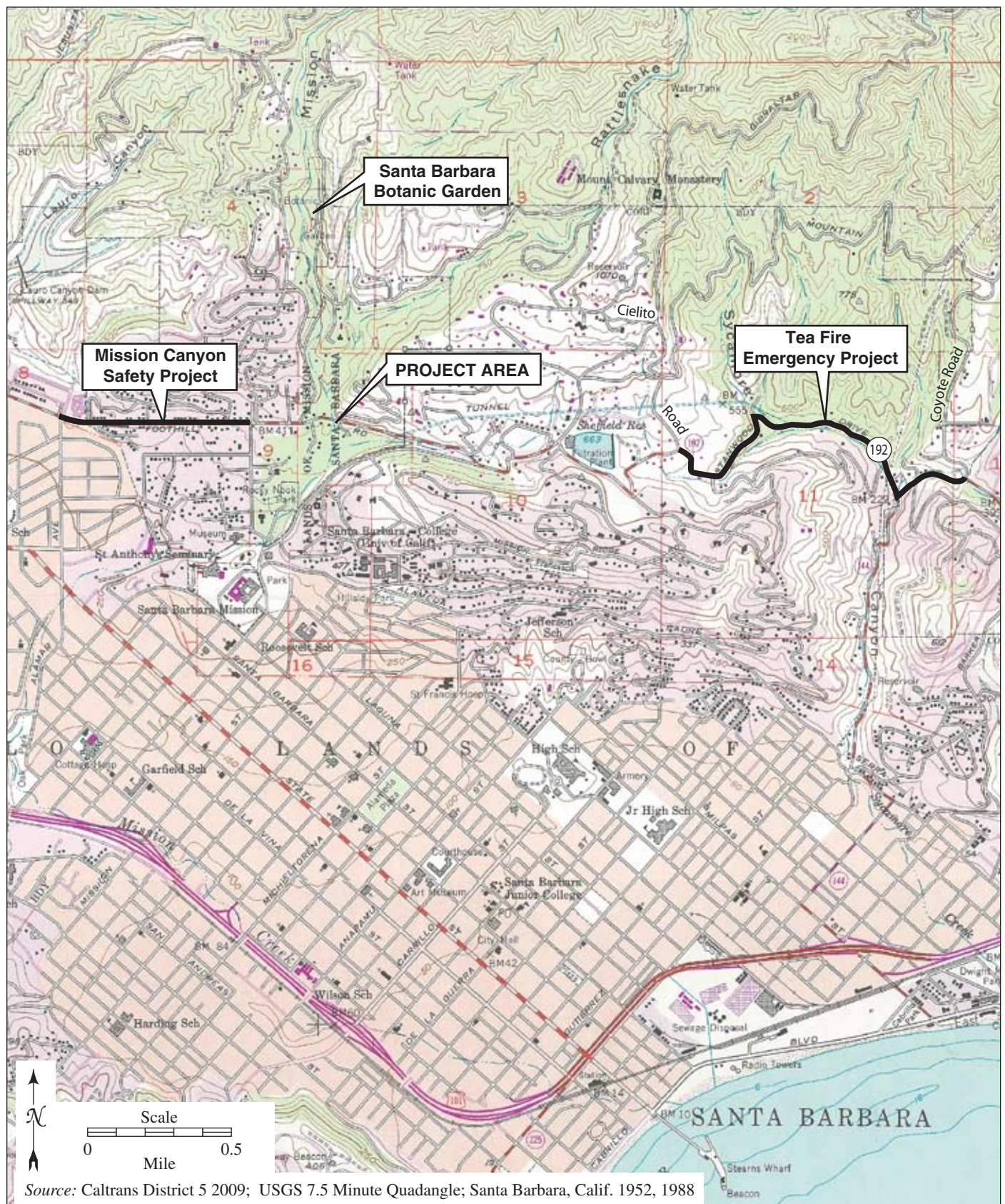


Figure A-5. Existing Pipeline Diagram





**Figure A-6. Projects Currently Under Construction or Proposed in the Vicinity of the Proposed Project Area**



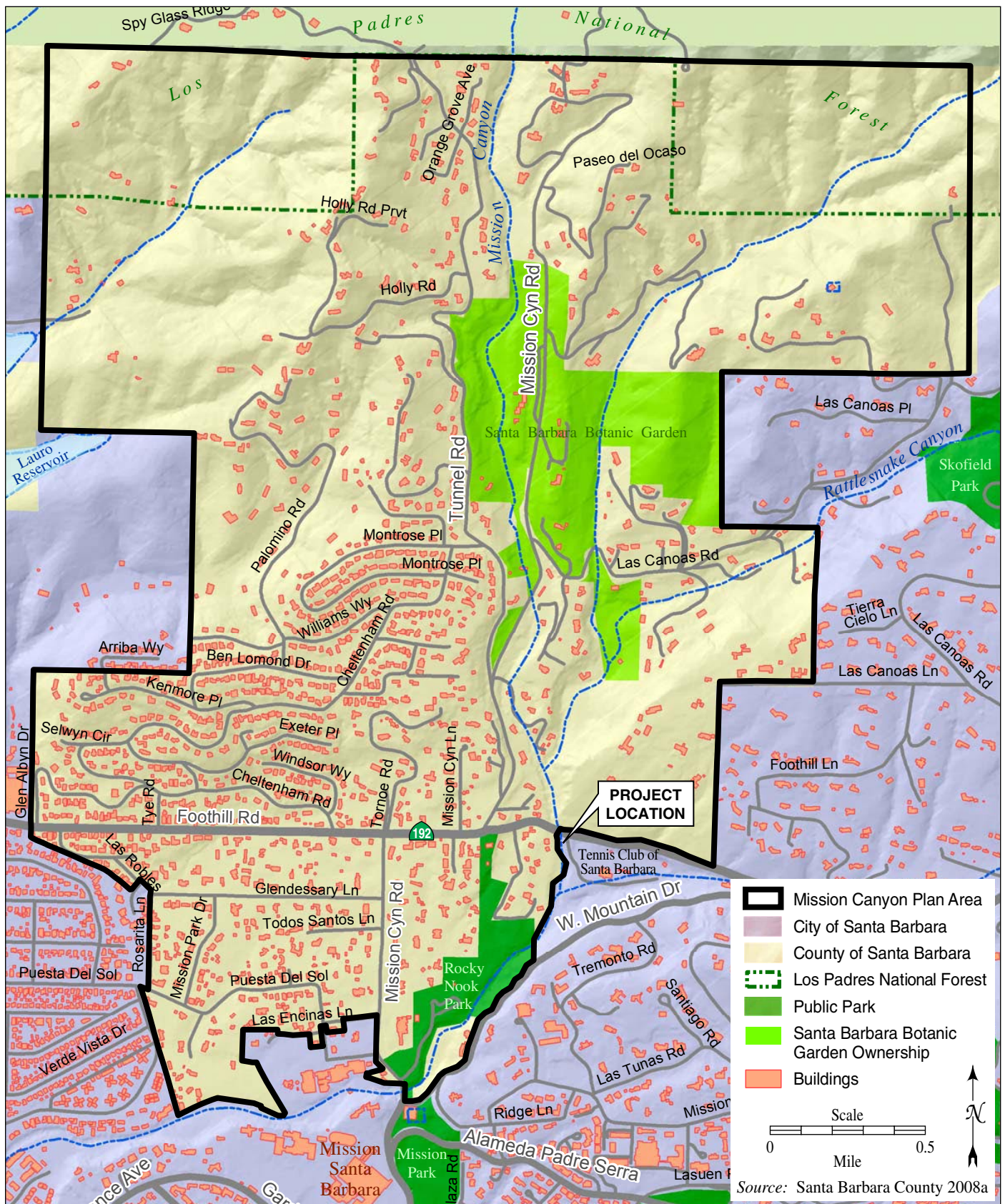


Figure A-7. Land Use in the Project Vicinity